REFERENCE SERVICE

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KRISHAN KUMAR

Reader
Department of Library Science
University of Delhi

Second Revised Edition

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PREFACE TO THE SECOND EDITION

The field of Reference Service is an extremely active one, to the extent that the need was felt to bring out a revised edition. The decision was also prompted by the encouraging response to the first edition. The text has been revised keeping in view the new developments, appearance of new significant reference tools and changes that have been incorporated in the works covered in the previous edition.

Additional case studies have been provided. Some new readings have also been added to bring further readings up-to-date. An attempt has been made to overcome the shortcomings of the previous edition. It is hoped that the work would come up to expectations.

1 DEVELOPMENTS

The field of reference service is vast and dynamic and many new developments have taken place in it during the last ten years or so. The rapid developments have occurred in computer technology, telecommunication (including satellite communication), printing, reprography, etc. These developments have important implications for the provision of information by libraries/information centres/documentation centres to their users. Great advances have been made in the automation of indexing and abstracting services, which are important tools for providing reference service. The application of computer has made it possible to create large data bases, leading to efficient and fast access to sources of information for current awareness services as well as retrospective literature search. Provision of direct access to computerized data base via a terminal is an important achievement. An important development is the provision of computerized SDI (Selective Dissemination of Information) service. The computers have led to increase in the scope and variety of reference services, which can be provided to the users. However, libraries in developing countries have not taken advantage of application

of computer except in few cases.

The field of knowledge is dynamic and a reference librarian is being called upon to perform newer roles. Within the last ten years, the library/information science field seems to have been introduced to a variety of information roles, namely, the technological gate-keeper, the intelligence officer, the information communicator, the information broker, etc. These roles are not totally new but there is a different kind of emphasis. These have also not been defined in clear terms. It will take some time before these concepts get recognized properly.

Although, we are far away from the automation of direct reference process but reference librarians are making an attempt to analyse critically the reference process, to reconsider the philosophy of reference librarianship including re-defining of goals of reference service. This is a healthy sign.

2 AIM

Despite the fact that a number of textbooks on reference service have appeared in recent years, there is perhaps some justification for writing one more. This work makes a special effort to cover reference books of Indian origin, written in English.

This work is intended primarily to meet the requirements of students studying for the Bachelor of Library Science and Diploma in Library Science courses. The author hopes that reference librarians will equally find this work useful in helping them to use reference sources in a meaningful and effective way. It will also serve the users of a library including laymen, college students and others interested in finding out information from reference sources. The purpose of this book would be well served if the interest of readers in the subject of reference service is aroused, encouraged and developed along the right lines.

3 SCOPE

The field of reference service is so vast that it is not possible within the compass of a single volume to cover the whole of it comprehensively. The present book, therefore, is intended to serve merely as an introduction to the subject.

In a library, provision of reference service involves not only find-

ing the answers to queries but also performing other functions like location of documents, compilation of bibliographies, providing readers' advisory service, doing inter-library loan work, etc. However, scope of reference service varies from library to library depending upon the policy of a given library. In order to provide reference service effectively, one should know enough about the sources of information and also be able to use these profitably. One is expected to possess a broad understanding of the whole process of giving reference service and human approach is basic to the whole process of providing such a service.

The book describes the various aspects of reference/information service covering various methods, principles, theories, practices, problems, etc. It also gives an overview of the reference books including dictionaries, encyclopaedias, biographical sources, yearbooks, almanacs, supplements to encyclopaedias, geographical sources, directories, current sources, handbooks, manuals, sources of statistics, bibliographies etc. As the number of these is extremely large, therefore only basic reference materials have been dealt. Those titles were selected, which were considered to be important enough for general reference collections in developing countries with emphasis on Indian reference sources in English. Such titles include most valuable and also most frequently used ones.

4 PRESENTATION

A special attempt has been made to make this work readable. Descriptions are simple and direct. A large number of suitable examples of various categories of reference books including trade bibliographies, union catalogues, indexing and abstracting services, etc. have been provided. Outstanding works have been cited as good examples of their kind, especially those which have appeared in recent years. These have been dealt with in some detail. However, readers are expected to personally evaluate at least the major works in order to get an adequate idea about them. There is no better way of learning about reference books than handling them, to obtain the kind of information which may be sought by users.

A large number of headings and subheadings have been provided, each of which has been assigned a number based on sector notation, where 9 has been used as a sectorising digit. Thus, the following numbers represent coordinate headings:

1 2 3 4 5 6 7 8 91 92 93 94 95 96 97 98 991 992 993 . . . 998, etc.

The subdivisions of 1, for instance, would be represented by the following coordinate numbers:

11 12 13 14 15 16 17 18 191 192 193 . . . 198, etc.

Similarly subdivisions of other numbers have been constructed. Where essential, footnotes have been given and at the end of each chapter a list of further reading has also been provided. The aim of further reading is to stimulate the reader to use these for further study.

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CONTENTS

1 INTRODUCTION

1 EARLY LIBRARIES

AT one time, a library was regarded as a storehouse and books were meant for preservation. The librarian was supposed to be a custodian, who did not encourage the use of books. The users were expected to use the library on their own. At the most, if a user asked for a book, then so called librarian would pass on the book and leave him alone. As far as possible a librarian kept out of the way of the users. Not much was expected from him. He merely served as a care taker. Perhaps, there was not enough incentive for him to become dynamic. Libraries tended to be passive and archival institutions.

2 MODERN LIBRARIES

A modern library, with a few exceptions is regarded as a service institution. Its aim is to enable the users to make the most effective use of the resources and services of the library. This type of library acquires material, processes it, and makes it available for use rather than preservation. It allows open access to its collection and provides service to its users. It is expected to convert potential users into habitual users. A habitual user is the one, who goes to a library regularly and uses the library as a matter of habit.

3 NEED FOR A HUMAN AGENCY

In order to convert potential users into habitual users, it is essential to establish a desired kind of contact between the user and the document. The term 'document' refers to printed, handwritten and engraved materials, including books, periodical publications, microfilms, photographs, gramophone records, tape records, etc. Establishment of right contact between a user and a document assumes the existence of documents as well as users.

Take the case of books, these themselves are artificial entities. Their appreciation does not come automatically. It requires a special

effort to understand and appreciate these. The interest in books cannot be cultivated easily. There is need to have a human being in a library, who can serve as a sort of canvassing agent. He should be able to explain the advantages of a given book so that the user is able to appreciate a particular book. This will enable a user to select a right kind of book, which will suit his requirements. The same can be said about other kinds of documents. However, this may not be necessary for those who can help themselves in this regard.

The users themselves belong to various kinds. They may be gentle, aggressive, meek, etc. They may be less educated or highly educated. When a user comes to the library for the first time, he would need to be taken care of by a human being. Otherwise he may feel utterly lost or confused, with the result that he may or may not come again. As such he should be given due attention by a human agency. Even those, who may be coming regularly would need occasional personal assistance. Again, if a person is of shy nature, then he would require special attention. Further, in order to convert him, it is essential to give him promptly the documents required by him All this goes to show that there is a need for a human agency.

In order to facilitate the use of a library, librarians provide tools like library catalogue, shelf list and bibliographies, etc. Written guides of various kinds are made available to make the use of a library easy. Various methods of publicity are used to attract the readers. Open access is also provided for the same purpose. However, all this is not enough. The tools like library catalogue, shelf list and bibliographies, etc. are artificial in nature. These are of intricate nature being based on complex rules and practices, which need to be learnt and understood properly to the necessary extent. The availability of these tools does not necessarily mean easy availability of materials. Thus we need a human agency, which can explain the use of the tools and conventions adopted by the library in respect of these.

From the above, we may conclude that the presence of a human agency is a must for establishing a right contact between a user and a document.

4 CONCEPT OF REFERENCE SERVICE

According to Ranganathan, right contact means, "contact between the right reader and the right book at the right time and in the

right personal way." He is of the view that the establishment of such a contact is "the only available and effective method"[1] of discharging the function of converting the users into habitual users. He has named this method as reference service. Thus, he adds that "Reference service is the establishing of contact between reader and book by personal service." Here emphasis is laid on personal service to each user to help him to find documents, which would meet his requirements.

According to Hutchins, "Reference work includes the direct, personal aid within a library to persons in search of information for whatever purpose, and also various library activities especially aimed at making information as easily available as possible."[2] The author rightly emphasises the spirit of humanization. But it would be better to use the term reference service instead of reference work. The first one draws attention to service aspect. The present day literature also prefers the term reference service.

It is rather difficult to find a definition of reference service, which would be generally acceptable. Different persons have defined it differently. Broadly speaking, reference service is what a reference librarian does.

5 ORIGIN AND DEVELOPMENT OF REFERENCE SERVICE

Personal assistance was occasionally provided even during early period of library development. However, it was provided on ad hoc basis. Reference service came into being only when personal assistance began to be considered a basic function of the library and provided in the form of a deliberate programme. According to Rothstein, in United States, "the very notion of reference service goes back no further than 1875."[3] Thus in advanced countries like USA, the concept of reference service has developed during the last 100 years or so. But in countries like India, the concept developed much later.

In USA, it was first in public libraries that reference service was developed because they were supposed to justify the expenditure of

[1]S. R. Ranganathan, *Reference service*, 2nd ed., Bombay, Asia Publishing House, 1961, p. 68.
[2]Margaret Hutchins, *Introduction to reference work*, Chicago, American Library Association, 1944, p. 10.
[3]S. Rothstein, *Development of reference services through academic traditions, public library practice and special librarionship*, Chicago, Association of College and Reference Libraries, 1955, p. 4.

city funds. It was considered that a programme of personal assistance could lead to greater use of a library, making it possible to get greater support from the authorities. By the end of 19th century, specialized reference staff began to be employed in large public libraries and provision of reference service was considered an important responsibility. Now, in the United States, reference service is regarded as the most important service provided by any library, big or small. Public and special libraries in USA have been very successful in providing reference service. They have succeeded in setting up a very fine tradition of reference service.

In India, many librarians have been trained in USA or UK. As a result, they have been influenced by Western tradition. This has helped in the development of reference service. But reference service has developed rather late.

Ranganathan's *Five laws of library science*[4] was published in 1931. It provided a scientific approach to library science. The essence of this work was—that books are meant for use and user is the prime factor, his time must be saved. This showed a clear concept of reference service. Ranganathan was also a pioneer in putting reference service into practice. Due to his efforts, "by 1930, reference service had put on full steam in the Madras University Library. Five smart young graduates formed the squad of reference librarians. They had specialised in different subjects in their degree course. The universe of knowledge was roughly shared among the five. They started reference service with a short in-training course given by me. They learnt the art of reference service in great detail during the process of actually giving the service in full faith and with the zeal of a pioneer."[5]

It was only in 1937 that a post designated as "reference librarian" was accepted[6] at the Madras University Library. This was perhaps the first university library in India which attempted to set up a regular reference service for its users. Today, most of the university libraries have a reference section with a full-time professional person being the in-charge. This phenomenon of providing reference service on regular basis in the form of a deliberate programme of personal aid is 15 or 20 years old. Earlier circulation sections of university libraries used to provide reference service on casual basis. However,

- [4]S. R. Ranganathan, *Five laws of library science*, Madras, Madras Library Association, 1931 (second edition was published in 1957).
[5]S. R. Ranganathan, *Reference service, op. cit.*, p. 39.
[6]*Ibid.*, p. 27.

in case of specialized queries, these were replied by the subject specialists on the staff. Special libraries in India have been more active in providing reference service. Public and college libraries have lagged behind in this respect.

There is no denying the fact that most of the questions received by reference sections of Indian libraries are routine inquiries. Questions requiring long search for information are neither expected nor asked (some of the special libraries may be an exception). The reason being that a tradition of rendering reference service of a high order has yet to be built. The response of the reference staff to the users is usually not encouraging. Besides, the reference collections are extremely poor and the reference librarian's knowledge about sources of information may be inadequate. Of course there are exceptions.

What are the reasons due to which reference service has developed late in India? The demands made by students, teachers, scholars and the public upon libraries have been rather modest. The expectations have been too low. Under such a situation anything would do. Besides, the scholars have held the view that they knew the sources of information and could get the information on their own, thinking that librarians can hardly help them. At the same time librarians have been too busy with routines, leaving little time for reference service. Lack of funds for the purchase of reference books and lack of staff have been the most important factors, which have impeded the growth and development of reference service. However, the situation is changing, the expectations of users are becoming higher. The users are asking for more and more of personal assistance.

After the Second World War, information has become a major enterprise. In different countries of the world information is being increasingly regarded as a national resource and a social good. In a democracy, it is considered the responsibility of the state to provide information to the people. During the recent years, the application of computer, production of data bases and introduction of information networks has greatly changed the approach and attitudes towards reference/information service. Thus reference service is being accepted as an essential function of a library.

6 REFERENCE SECTION

Every well-organized, large or medium library is organized into a number of sections or departments. One of the sections is called reference section. In a small library, there may be no separate reference section.

A reference section is that section which provides reference service. In the narrow sense, it may be expected to provide answers to the queries of the users. But in a broader sense, it may have to provide a variety of services, and perform functions necessary to help the users including providing information service on demand and in anticipation, providing instruction in the use of library, selection of documents, organization of reference materials, etc.

7 REFERENCE BOOK

We may recognize two categories of books, namely, those which can be read through for information or education or inspiration and ones which are meant to be consulted or referred to for a definite piece of information. The borderline between the two categories is not hard or fast one. The second category is called reference books. These include encyclopaedias, dictionaries, handbooks, tables, year books, formularies, etc. These are compiled so that everyday information can be provided readily. Reference books form the basis of reference service in a library. The quality of reference collection available in a library is very important for the success of reference service.

8 REFERENCE LIBRARIAN

The function of the reference staff is to interpret the library resources to the users. In the performance of its job, reference staff is expected to use the total resources of the library and also the resources available outside the library. The outside resources may include an individual or an institution or a library/documentation centre/information centre. If local resources are not found helpful, then national or international resources can be made use of. This should be the aim. In actual practice, many of the libraries restrict themselves to resources available within the library. Due to the availability of modern technology, it is becoming increasingly possible to use outside resources effectively.

· The person who provides reference service is called a reference librarian. He should possess a wide range of intellectual interests, desire to assist the users, flair for organizing documents, ability to search literature and adequate knowledge of the resources of the library. The job of a reference librarian can be a difficult one. He will have to deal with all kinds of users, some of them may be difficult ones or too demanding. Some may appreciate his services, others may never feel satisfied.

The role of a reference librarian is an extremely important one. The reputation of a modern library to a large extent depends upon the quality of reference service provided by it. A good reference service is bound to encourage the use of the library. This can lead to library support from all quarters.

Throughout the book, the term reference librarian has been used. It also refers to information officer/intelligence officer/information scientist. Therefore, the use of the term reference librarian should be understood in the context.

91 IMPACT OF REFERENCE SERVICE

We will attempt to consider the impact of reference service on the parent organization, the users and various aspects of librarianship.

Library support. Reference service helps the users to get right kind of documents and information at the right time, thus saving their time. It assists the researchers to avoid duplication of work and helps them in the introduction of new ideas. It makes information available to decision-makers to take right decisions. Thus reference service attempts to fulfil the objectives of the parent body. A satisfied user serves as a friend of the library and can be helpful in getting greater support for the library. If the reference service is poor, then it will create a poor image of the library. Thus the library may lose support from its users and the parent body. This shows the impact of reference service.

Library service. The experience shows that the impact of reference service leads to increased demand for library services including reference service. In order to improve the situation the reference librarian makes an effort to educate himself (finds out more about the users and their requirements, the sources of information), produces better tools, uses better techniques and methods, etc. This leads to better reference service. As a result, there is more effective use of the library. This produces a cycle of reference service and better use of the library.

Organization of the library. Reference service is considered as an important service. Organization of a library takes it into consideration. Therefore, library catalogue is placed near the stacks and reference collection is put near the catalogue. Reference section is located near the stacks and the library catalogue. This is done to suit the provision of reference service and for the sake of users.

Circulation of documents. Reference staff would know about the quantity of demand regarding various documents on the basis of

their reservation by users. In case, a book is in great demand, then reference section would tell the circulation section to put it in the reserve section. Similarly, it can indicate whether or not a given reference book should be allowed to be borrowed. Reference staff can help circulation section to decide the period of loan for different categories of documents.

Book selection. Inter-library loan records kept by this section would point out the weak areas in the collection. It would indicate as to which books need to be selected. Similarly, on the basis of the queries received by it, it would be able to make suggestions for selection of various kinds of documents.

Acquisition. A user might make a request for a book already on order. Then the reference section would approach the acquisition section to acquire the book as early as possible. This might necessitate the sending of a reminder to the vendor. If a book is urgently needed, the reference section might request the acquisition section to acquire the book by air. The above kinds of possibilities would also arise for the acquisition of reference books. If these are acquired late, then this would badly affect the provision of reference service. This leads to the conclusion that the implication of reference service for acquisition section would be to acquire books in time.

Classification. A reference librarian can make suggestions about arrangement of documents on shelf. He can tell whether or not broad classification is desirable in a given library. He would be able to point out to a classifier unhelpful placing of books or mistakes in classification.

Cataloguing. A reference librarian can provide help to a cataloguer and vice versa. In order to serve as a finding list, a catalogue needs to provide minimum bare information but in order to satisfy the requirements of reference service, more information would be required than otherwise is given, such as information about imprint, collation and notes, etc. A reference librarian would also insist on uniformity, consistency and accuracy of details.

Conclusion. In order to have full impact, the reference staff should improve their efficiency and become more alert. The degree of impact would be the measures of their capability and effectiveness.

As we have seen that reference service influences all aspects of librarianship to lesser or greater extent. It can lead to increased demands for services and makes it possible for the effective use of the resources of the library. It should form hub of all the activities that go on in a library. It may be considered as the ultimate manifestation of the laws of library science.

92 CONCLUSION

The reference service, as we have seen, is an essential service provided by a service library. It plays an important role in satisfying the laws of library science. It helps to maximise the use of a library. Whereby, it can greatly help in meeting the objectives of a library and as well as laws of library science. Reference service involves spirit of humanism, which aims to establish right contact between a right user and a right document at a right time. This requires a human agency, which could undertake this. Thus the role of a reference librarian becomes extremely important. The success of reference service depends greatly upon the reference librarian. Even out of a small collection, he can get the maximum. Of course, a poor collection and also poorly organized one can prove to be a great handicap to a reference librarian.

FURTHER READING

Margaret Hutchins, *Introduction to reference work*, Chicago American Library Association, 1944, pp. 10-13, 82-83.

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B. F. Vavrek, "Nature of reference librarianship," RQ, 13, 1974, pp. 213-17.

2 KINDS AND NATURE OF REFERENCE SERVICE IN DIFFERENT TYPES OF LIBRARIES

0 INTRODUCTION

A reference collection exists for providing answers to the questions, which is true irrespective of type, size or location of a library. But the objectives, functions, traditions and situations might differ from library to library. As a result, there would be differences in kinds and nature of reference services rendered in different types of libraries. One should appreciate these differences. However, the same reference techniques are applicable in different types of libraries.

1 KINDS OF REFERENCE SERVICES

The kinds of reference services being performed would vary from library to library. The services being rendered would depend upon the following factors:

(*i*) Local situation,
(*ii*) Local traditions,
(*iii*) Kinds of users,
(*iv*) Size of the library,
(*v*) Resources of the library and
(*vi*) Philosophy of the chief librarian regarding organization and administration.

We may divide services into three groups, namely: (*a*) basic ones, (*b*) those performed usually, and (*c*) those performed sometimes. The grouping has been done keeping in view the existing situation in Indian libraries.

11 Basic Services

These are those services which every library should try to perform. This is the minimum, which we can expect. That is why, we may call these as basic services.

It is suggested that the services given on page 11 should be regarded as basic ones:

(*i*) Provision of general information,

(*ii*) Provision of specific information,

(*iii*) Assistance in the location (or searching) of documents,

(*iv*) Assistance in the use of library catalogue, and

(*v*) Assistance in the use of reference books, etc.

(*i*) *Provision of general information.* The following are the kinds of questions, which may be included under general information.

(*a*) Where are stacks?

(*b*) Where is textbook section?

(*c*) Where does the chief librarian sit?

(*d*) Where can I smoke?

(*e*) I want to become a member, could I get a copy of the rules for membership.

(*ii*) *Provision of specific information.* Provision of specific information would require the use of documents available in the library or consultation of another colleague or another library. The extent of the service provided will vary from library to library or sometimes from user to user.

(*iii*) *Assistance in searching and location of documents.* Assistance means that aid is given so that the user is able to find an answer to a query in hand but instruction is systematic approach to teach the user as to how to use the library profitably. We can differentiate between assistance and instruction but the borderline is not always sharp.

Here a distinction has been made between location and searching of documents. Location refers to the place on the shelf where the document should normally be available. In case it is not available on the shelf, then a search would be necessary.

(*iv*) *Assistance in the use of library catalogue.* Library catalogue is an important tool, which is a record of the holdings of a library. In order to make the full use of a library, a user must know how to make use of a library. But it has an element of artificiality about it being based on conventions. It is not easy to understand. Therefore, it is essential that a reference librarian should provide assistance in its use.

(*v*) *Assistance in the use of reference books.* The reference books have an element of artificiality about them. These have peculiarities of their own to the extent that these vary in the arrangement of information, level of presentation, etc. As a result, very often a user might need assistance in their use.

1.2 Services Performed Usually

The following are the services performed usually:

(i) Inter-library loan,

(ii) Reservation of documents,

(iii) Library instruction:

(a) General instructions in the use of library and (b) Special instructions required to use the tools like library catalogue, bibliographies, reference works, microfilm reader, etc.

(iv) Library tour: Taking visitors and new members around the library,

(v) Holding of library exhibitions including display of new additions to the library,

(vi) Issue of library use permit to casual users (non-members),

(vii) Contributing to or preparing library publications,

(viii) Readers' advisory service (to guide in the selection of documents),

(ix) Indexing and abstracting services,

(x) Compilation of bibliographies,

(xi) Maintenance of clippings,

(xii) Maintenance of vertical files containing pamphlets like prospectuses, reports, etc.

(i) *Inter-library loan.* Inter-library loan refers to request for a document not available in the library. Whatever might be the nature of a library, but it should take advantage of borrowing books from other libraries especially those in the same town itself. It can prove to be a boon.

(ii) *Reservation of documents.* In case a document has been loaned, then a user who needs it, can get it reserved. So that when the document is returned then the user can be informed and he can get it issued.

(iii) *Library instruction.* Here assistance to a user has been distinguished from provision of instruction. Assistance refers to the aid given to the user so that he is able to find answer to the query in hand. Instruction is a systematic approach to teach the user as to how to use the library profitably.

Library orientation is also a part of library instruction. However, orientation is given in the beginning but library instruction continues. Library instruction is a teaching function. When a student in an academic library approaches the reference librarian for assistance, he should also be instructed as to how to use the library on his own. This is a continuation of initiation of a freshman. Therefore, sometimes, it would not be possible to draw a line of demarcation between

assistance and library instruction.

Library instruction should be provided regarding general use of library and use of the library tools. Instruction should be provided systematically. In certain situations, for instance, in a special library serving specialists. the users may have to be provided ready information. In such a case, the question of providing instruction would not arise.

Teaching library use is becoming increasingly important. It is a specialized area and not every librarian can do it effectively. It requires training, experience and special aptitude. A person engaged in teaching library use should be possess teaching skills. Large libraries such as university, national and public libraries should employ teaching librarians. Library schools have not paid enough attention to reader instruction in their teaching programmes. There is need to develop specialized courses to train such persons. The emphasis in such courses should be on training teaching skills. It is considered that college/university library users, who are used to teacher-role relationships would possibly respond favourably to the role of a librarian as a teacher. In fact a teacher librarian possessing good teaching skills would prove to be more effective in teaching library use in a public library also.

(*iv*) *Library tour*. Visitors to the library may be taken around the library. A library tour can serve a useful purpose for freshmen (new members).

(*v*) *Holding of library exhibitions*. Holding of exhibitions is essential to attract users. Display of new additions to the library is a very important function. This is one way by which a reader can become aware of new documents added to the library. Browsing new additions can be very fruitful for users and reference staff also.

(*vi*) *Issue of library use permits*. When a casual user (non-member) wants to use a library, the library staff will satisfy themselves that the person is a genuine user and he would be permitted use of the library for a particular period. Such a person is usually not given borrowing facilities.

(*vii*) *Contributing to or preparing library publications*. A reference section may bring out a handbook of the library, library catalogue, bibliographies, indexing and abstracting services, etc. Reference section can also assist other sections to bring out publications. Publication programme can bring prestige to a reference section.

(*viii*) *Readers' advisory service*. It is concerned with providing reading guidance to individuals. That is what they might read. It is more required in public libraries than in academic and special

libraries. The reason being that teachers, students and specialists are motivated to read and use the library. However, this may be less true for children using school libraries. The school children need this kind of service very much.

Somebody may be looking for a good detective novel, a drama on ills of modern society, and a good book on planting of roses. Such a person might need guidance from reference staff.

The aim is to find a right book for a right reader to serve his educational or recreational requirements. In a school library or a public library, a reference librarian should pass on works of fiction to users and convert them into habitual readers. Once they have acquired reading habit, then he should try to convert them to non-fiction. Thus one of the aims being to cultivate reading habit.

There has been a controversy as to whether there should be a separate section for providing this service or reference section should perform this service. We are of the view that this kind of service should better be performed by reference section. In this regard reference sections of subject departmental or divisional libraries are better qualified to provide such a service. In some of the public libraries in USA, there are 'readers' advisers', who are specially designated as such. The other thing done is to set apart a collection called general education collection. In order to provide RAS, indexes book reviews, book selection tools, lists of best books are found highly useful. A readers' adviser in a public library provides a vital service but very few guidelines are available, which could help him to perform his job effectively.

In a school library, usually, there would be just one professional librarian who may not be in a position to provide RAS to as many students as one would desire to. Therefore, senior students can possibly provide help to junior students. Of course, the main burden would be borne by the librarian himself.

(*ix*) *Indexing and abstracting services*. In special libraries indexing and abstracting services are becoming increasingly important. A special library may produce such a service locally, which may or may not be published. In case these are not published, the library m *r* maintain information on slips or cards, which can be consulted fc providing information to the readers. Other types of libraries can also produce these services, depending upon the requirements of its users and availability of resources.

(*x*) *Compilation of bibliographies*. This service may be done on demand or in anticipation. This is a service, which should be provided in different types of libraries. This can greatly help in

increasing the use of a library.

(*xi*) *Maintenance of clippings*. Clippings from newspapers, magazines, pamphlets, etc. form a special class of material. These have their own importance.

(*xii*) *Maintenance of vertical files*. The vertical files containing pamphlets, prospectuses, reports, press clippings, etc. form an important source of information.

13 Services Performed Sometimes

The services performed sometimes are listed below:

(*i*) Display of current periodicals,

(*ii*) Maintenance of special files, *e.g.* files relating to the present activities, past correspondence of the parent body,

(*iii*) Reproduction of documents (xerox, microfilming, etc.) and

(*iv*) Translation service,

(*v*) Referral service: Normally reference staff attempts to bring users in contact with documents likely to contain required information. Similarly, reference staff can tell about persons and institutions, who may be able to provide information to the users seeking information. Mention may be made of the National Referral Centre for Science and Technology at the Library of Congress (Washington, D.C.) (USA). A researcher doing research on a topic can write or send a phone call, to the centre describing his query in precise terms. From its tapes, containing information about research programmes, the centre can provide names, addresses, telephone numbers and brief description of the persons and institutions, who might be having the information.

Besides the above services, a reference section may have to perform the following functions:

(*i*) Book selection,

(*ii*) Processing of theses and dissertations,

(*iii*) Maintenance of library catalogues,

(*iv*) Shelving of documents,

(*v*) Binding, and

(*vi*) Any special project.

Strictly speaking, the above functions do not fall within the purview of reference section. At the best, reference section can assist other sections in performing these functions. For instance, if a reference section notices weakeness in a particular collection, then the same can be brought to the attention of book selection section. Similarly, it can help other sections.

14 Conclusion

The above listing is not an exhaustive one but it merely indicates the services, which can possibly be performed by a reference section irrespective of the type or size of the library. In Indian libraries, reference service is not given enough attention with the result that a function, which no other section can perform conveniently is passed on to reference section. This often leads to the overburdening of the section.

American Library Association's Reference Services Division[1] recognizes two essential types of reference services—direct and indirect. Under direct reference service, personal assistance is provided directly to the users. It may take the form of library instruction and information service (to provide information sought by the user). Indirect reference service consists of preparation and development of catalogues, bibliographies, other reference aids, selection of documents, organization and administration of reference section, evaluation of reference section, maintenance of relevant files, miscellaneous functions such as photocopying, supervision of reading rooms, etc.

Edward B. Reeves etc.[2] have categorized activities of reference staff into the following five categories on the basis of related functions:

(*a*) Instructional activities: These are characterized by explicit teaching functions.

(*b*) Skill maintenance activities: These are related to up-dating knowledge of reference tools.

(*c*) Patron service activities: These deal with providing information to the users of reference service.

(*d*) Maintenance activities: These are house keeping activities.

(*e*) Surrogate activities: These are those activities, which reference staff performs on behalf of the other departments/sections of the library.

2 NATURE OF REFERENCE SERVICE

Reference service is most intense kind of personal service, which attempts to bring together the user and the document in a personal way. The nature of reference service varies from one type to another

[1]Arthur Ray Rowland, *Reference services*, Hamden Conn., Shoe String, 1964, pp. 135-44.

[2]Edward B. Reeves etc., "Before the looking-glass," *RQ* 17 (no.1), 1977, pp. 25-32.

type of library. The nature differs due to the kind of clientele to be served and the objectives of the library to be fulfilled. However, it is claimed that the reference technique of search process is basically the same in all types of libraries.

21 Public Libraries

A public library serves the public. A public library is expected to perform the functions of providing for recreation, information, inspiration and education. It serves the local community and is open to public without any distinction. Obviously the clientele to be served would cover a wide spectrum. It may include students, teachers, research scholars, businessmen, professionals, housewives, retired persons, neo-literates, etc. Their educational attainments, interests, cultural background will vary a great deal. Therefore, their range of questions will cover wide areas of knowledge.

Little is known about users of public libraries in India. There is a need to conduct users' surveys. From our experience, we know that mostly users use a public library either for general reading or for obtaining documents or information on a subject. College students mainly use it for the second purpose. Persons interested in general reading would usually go directly to the shelf and choose a book(s) which would seem to be interesting or relevant to them. Such people are less likely to use reference services. Those who use the library for obtaining document(s) or information on a subject are more likely to make use of reference services.

In order to serve the public in the best possible manner, a reference librarian should study the population to be served. He should know their needs, interests, activities, nature of jobs, local institutions, etc.

Most of the questions asked in a public library would be of fact and background type. These questions may be related to local history, local industries and local institutions, local personalities, etc. These form ready reference type of questions, which can be answered in short time with the help of ready reference sources.

A reference librarian would be expected to provide advisory service to children, housewives and others. A child might approach a reference desk and make a request for a good book on history of Europe. A reference librarian should be able to advise him in this regard. A housewife may request for a good book on cooking. A reference librarian should be in a position to recommend a suitable book on this topic.

In the context of a country like India, a public librarian would have to give special attention to neo-literates. Their requirements

are of special nature. They would need readers' advisory service a great deal.

It is being increasingly realized that public libraries should also provide information, which may be required by a layman for his survival in the society. For example, 'how to deal with a TV dealer, who has cheated the customer in the sale of a TV set,' 'how to deal with a landlord, who wants to evict a tenant.' However, in such cases, the users must be specifically told that the library merely provides the documents or information but they should take their own decision to find solution to their problems.

A reference section should provide current information on services made available by local bodies. It should also maintain a list of individuals and organizations, from whom a user can get the information.

Reference service through phone is a special feature of large public libraries in USA. It is usually limited to answering quick, ready reference questions. In the years to come, public libraries, at least in major cities, will have to develop such a service. Such a service can serve as a useful link between one and another library.

22 Special Libraries

A special library is the one, which is specializing in a particular subject or group of subjects or a particular form of documents. Some people even consider libraries serving the needs of special clientele (e.g. blinds, prisoners, patients, children, etc.) as special libraries.

A special library exists to serve its parent body. Therefore, aim of a special library is to further the interests of its parent body. The clientele to be served will be generally limited but often being specialists they would be well informed in their area of specialization. A special library offers specialized services to its specialized users.

The quality of reference service has a profound influence on the efforts of the specialists. In other words, the success of the parent body towards achieving its objectives can be helped by high quality of reference service provided by a reference section.

In a special library, reference service is a mode of its existence. A reference librarian of a special library is generally expected to provide information because the specialists to be served would be busy persons. The queries may involve long searches. It is not unusual to spend number of days on obtaining information for an individual. He must be provided the required information irrespective of the form or place from where it may be got. Very often the emphasis is on

micro-documents, such as periodical articles, specialized reports, etc. Very often, a reference librarian will be expected to provide information quickly and efficiently. Thus he may be required to work under pressure.

It provides information not only on demand but also in anticipation. Provision of information in anticipation is a special feature of a special library. Thus many special libraries use manual or computerized selective dissemination of information (SDI) systems for keeping their users well informed through documents or piece of information.

In special libraries in India, reference service is getting good attention. In this respect these have done quite well. There are many examples of special libraries, which are actively involved in providing reference service to their parent organization. Thus future of reference service in special libraries is quite bright.

23 *Academic Libraries*

231 SCHOOL LIBRARIES

The objectives of a good educational system are to equip individuals to be able to play their role in the society effectively. A school library attempts to advance these objectives. It serves as a resources centre.

Audio-visual aids are fascinating from the point of children. Therefore, reference books provided for school children should contain sufficient illustrations. The stress should be to acquire illustrated encyclopaedias and, dictionaries, picture books, globes, maps, photographs, slides, film strips, films, gramophone records, etc.

Educating children should be an important function of a reference librarian (the same person would be a librarian as well as a reference librarian). The aim would be to provide to a child instruction in the use of library and its resources so that he can use the library on his own. Readers' advisory service would be an important service. In case, a student requests information about a fact, the aim of a reference librarian would be to guide him to a suitable source and teach him as to how to use that source. An approach similar to the above would have to be adopted in a children's section of a public library.

The librarian must encourage and assist the teachers to teach through the library. They should be provided information and documents necessary for this purpose. The librarian should assist the teachers in the development of teaching aids. He should collect

documents required for teaching in the class and pass on these to concerned teachers in time. The collection of a school library would usually be inadequate to serve the needs of teachers. Therefore, inter-library loan would have to be encouraged for them.

232 COLLEGE LIBRARIES

The clientele would consist of students and teachers. In a college library in India, there would be usually one professional librarian. Therefore, he would be expected to give reference service as and when the need arises.

The reference librarian should try to instruct the students and teachers so that they can become self-dependent. Of course, the reference librarian would have to be careful in dealing with teachers. Most of them would not like to be instructed.

The following reference services may be provided by a reference librarian:

(i) Instruction in the use of the library,
(ii) Assistance in the location (or searching) of documents or use of library catalogue or understanding of reference books, etc.
(iii) Readers' advisory service,
(iv) Provision of general and specific information,
(v) Inter-library loan.
(vi) Compilation of bibliographies and
(vii) Reservation of documents.

The users would mostly need fact and background type of information. Most often, they would be able to collect information on their own. Sometimes, they would consult the reference librarian. It is important that reference librarian should devise means to bring additions to the library to the notice of students and teachers.

Good reference service in college libraries in India is missing to a large extent. Most of the college students do not know how to make an effective use of a college library. The major problem is as how to provide instruction to students so that they succeed in using the library effectively. Take for instance, orientation of a freshman. College librarians have not been able to do it successfully. May be the students do not think library instruction to be of much importance to their practical needs. They think they can get along without it because they use the library mainly for textbooks. Library instruction will become important if methods of teaching and examination are changed so that the students are required to use the library resources- heavily whereby reference service will get activized. This would also require setting of an active readers' advisory service.

233 UNIVERSITY LIBRARIES

A university library' is supposed to perform the following functions: Teaching, research, publication, conservation of knowledge and ideas, extension and service, and interpretation.[3]

A university library is a part of a university set-up. Therefore, it exists to serve the objectives of its parent organization. In other words, a university library should aim to advance the functions of its university.

The clientele mainly consists of students, teachers and research scholars. Occasionally, the alumni and local community may also form the clientele. The requirements of the users are diverse in nature.

The services to be provided are listed below:

(*i*) Instruction in the use of the library,

(*ii*) Provision of general and specific information,

(*iii*) Assistance in the location (searching) of documents or use of library catalogue or understanding of reference books,

(*iv*) Literature search,

(*v*) Readers' advisory service,

(*vi*) Compilation of bibliographies, preparation of indexing and abstracting services,

(*vii*) Reservation of documents,

(*viii*) Inter-library loan,

(*ix*) Holding of library exhibitions including display of new additions to the library,

(*x*) Maintenance of clippings, and

(*xi*) Maintenance of vertical files containing pamphlets like prospectuses, reports, etc.

The kinds and nature of reference services to be provided would depend upon curriculum, research programmes, methods of teaching and objectives of the university education. Special attention should be given to current awareness services in the form of documentation lists, bibliographies, etc. SDI may be provided on selective basis to a few groups of users. For this purpose, the reference staff should know about research programmes, so that such services can be planned properly and put on sound footing.

In a university library, students should be encouraged to use the library on their own. In case, a student is searching for information then he should be directed to the right kind of sources. Students

[3]Louis Round Wilson and Maurice F. Tauber, *University library*, 2nd ed., New York, Columbia University Press, p. 25.

should be assisted in completing their assignment to a desirable extent only. Senior students are likely to be more proficient in the use of the library. But due to their varied needs as well as being more familiar with the library, they would be less hesitant in approaching the reference desk. Therefore, they are more likely to use reference services. As such junior students need to be given more encouragement.

The research scholars are expected to search for information on their own. However in the beginning of their research as well as at the stage of writing of their theses, they would require greater assistance from reference staff. Courses can be organized for senior students and research scholars, where they can be taught as to how a library can be used effectively. This may also involve how to do literature search, how to compile bibliographies, etc.

In case of teachers, they are apt to get greater attention than other users. In their case, there would be less emphasis on instruction. Reference staff would willingly carry out small pieces of searches for them. Occasionally they may be provided with long range reference service.

The needs of research scholars and teachers doing advanced research are highly specialized in nature. Theoretically speaking, they should be provided with high level services like selective dissemination of information, literature searches, etc., just as done in many of the special libraries. Informal, unsystematic type of current awareness services have been provided by departmental libraries for many years but provision of selective dissemination of information on systematic basis is a rare phenomenon. Other types of high level information services also have been missing a great deal in university libraries. However, demand for such services has not been very high. One of the reasons could be that research scholars and teachers in universities have been depending upon bibliographical services published by other agencies. Secondly, university libraries have few limitations on their areas of interest and areas covered may range over whole spectrum of human knowledge. With the result, it may be very difficult to cover such large number of specialized areas through local reference/ information services. Thus due to lack of time, money, staff, even if a reference section might like to provide intensive information service of the kind offered in special libraries, it would not be in a position to do so.

As research is becoming more interdisciplinary in nature, therefore, the chances of users of university libraries depending more and more

on reference service are increasing. University libraries are becoming increasingly aware of their responsibility towards their users. This is apparent from the number of current awareness services being produced by university libraries.

It was only in 1937 that a post designated as "Reference Librarian"[4] was accepted at the Madras University Library. This was perhaps the first university library in India which attempted to set up regular reference service for its users. Today, almost every university has a reference section with a full-time professional person in charge. These reference sections are mostly busy in locating and searching of documents and providing answers to general queries. There may be a few questions received by a reference section, which may require the use of ready reference sources of information or a few users may seek assistance in the use of catalogue or reference books. Questions requiring long range reference are usually neither expected nor asked. However, there may be exceptions here and there. Compilation of bibliographies and documentation lists is done occasionally. The reason is that the tradition of rendering reference services of a higher order has yet to be built. The response of the reference staff to the users is usually not encouraging. Besides, the reference collections are extremely poor and the reference librarian's knowledge about them is usually weak. Of course, there are a few exceptions. The situation is certainly improving. A reference librarian is supposed to play a very important role in the educational process. However, his task is difficult and varied in nature. Although, one of the most important functions to be performed by him is to educate the users yet he has failed very much in this regard.

24 Conclusion

We have seen that nature of reference service varies from one kind of library to another. The basic objective being to assist the users to use resources of the library in an effective manner leading, to their optimum utilization. The idea being that a user should be provided with SDI service. When he brings a query, then he should get an answer promptly, which should be pinpointed and exhaustive in nature. Thus he should get information/documents - not only on demand but also in anticipation. This is an aim, which every library should strive for. However, the kind and quality of reference service

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[4]S.R. Ranganathan, *Reference service*, 2nd ed., Bombay, Asia Publishing House, 1961, p. 27.

to be provided depends upon the policy of the library. The policy of
a library can change, whereby priorities of reference service are liable
to undergo a change.

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3 USERS AND NON-USERS

1 TERMS

THERE are various terms, which are employed to refer to those who use a library. These include terms like client, patron, reader, user, customer, inquirer, member, etc. Throughout this book the term user has been preferred because it indicates use of the library and its resources. Those who do not use a library would be considered non-users. A person may be member of a given library but if he does not use the library, then we will consider him a non-user of the library. In the context of reference service, a person who does not use it would be considered a non-user of reference service.

2 CATEGORIES

Categories of users may include a specialist, a student, a housewife, an average layman, a businessman, a teacher, etc. The categories of users will vary from library to library. Of course, the requirements of each category will also vary.

3 IMPORTANCE OF INFORMATION

Information is an important resource. The progress of modern society depends a great deal upon the provision of right kind of information in the right form at the right time. The planners of national or regional or local plans need information to be able to plan properly. A manager of business firm should have enough information to be able to take a right kind of decision. A businessman might need information to set up new business or to improve upon his existing business. A specialist might need information to keep himself up-to-date and well informed in his field of specialization. All this goes to show the value of information.

If information is valuable, it must be put to proper use. That is, it must be provided to the right kind of people, those who need it. In order to serve them efficiently, we must ascertain the needs of

these people in terms of information. They would include users as well as non-users of reference service.

4 ASCERTAINING INFORMATION ABOUT LIBRARY USERS' NEEDS

In section 4, we will deal with library users, which would cover users as well as non-users of reference service.

41 What

Determining the needs of the users means knowing about their requirement for information.   .

In order to determine their requirements, it is essential to know the following:

Who are they?

What is their background? (What are their qualifications, know-ledge of languages, areas of research and specialization?)

For what purpose, do they use the library?

How and from where do they get information?

How successful are they in using the library as well as in getting information?

What do they feel about the existing reference services?

What are their suggestions to improve the reference services?

42 Why

If information is an important resource, then suitable means must be made available so that the right kind of information or document reaches the right person at a right time.

The reference service or information service exists for the sake of users. It aims to provide documents or information itself or assist them in some other way to enable them to use library resources as the case may be. Therefore, it becomes essential to know about their requirements for information.

In case a new reference service is to be provided then the views of the users should be ascertained. Once a new service has been made available, then a reference librarian should try to find out how well it has been received.

If an attempt is made to ascertain requirements from the users, then they would get a feeling that at least the library is willing to look into their problems.

This kind of feedback is essential for establishing a rapport between the library and its users. It can do lot of good in improv-

ing the service as well as creating goodwill towards the reference section.

Large number of users' surveys have been carried out regarding use of libraries by specialists but non-specialists (say laymen) have been neglected. Of course, in India very few studies even regarding specialists have been carried out. Therefore, this area should be given due attention.

43 How

There are a variety of methods which can be used for determining the users' needs for information. Each has strong as well as weak points. However, taken together, these can give us a better idea about the needs of the users.

The following methods may be used for ascertaining the information for users' needs:

(i) Questionnaire method,
(ii) Interview method,
(iii) Analysis of the questions asked and questions which could not be answered by the reference desk,
(iv) Examination of the courses of study, research projects, etc. being pursued by the users depending upon their relevance,
(v) Personal experience of the reference librarian.

431 QUESTIONNAIRE METHOD

A set of questions can be framed in the form of a questionnaire. Such a questionnaire should be prepared carefully, keeping in view do's and dont's.

The following considerations should be kept in mind:

(i) Questions should be short, clear, easy to understand, unambiguous.
(ii) Questions should be framed keeping in view the objectives to be served by such a questionnaire. No question should be asked, which has no relevance to the objectives.
(iii) Questions should be such that the answers are short (preferably in the form of yes or no), definite and easy enough (without taxing the brain) to provide.
(iv) Questions should be such that it should be possible to get replies indicative of an element of objectivity.
(v) Do not ask questions, which are likely to offend or frighten or hurt the sentiments of the users.

(*vi*) Do not ask questions which call for confidential information.

(*vii*) The number of questions should be limited so that users do not feel like filling the questionnaire.

(*viii*) Provide enough instructions and explanation within the questionnaire to enable him to fill it up without much difficulty.

(*ix*) Necessary spaces should be provided for answers.

A typical example of a questionnaire for research scholars is given below:

QUESTIONNAIRE

Users' Survey

Conducted by Krishan Kumar

You are kindly requested to assist in collecting information so as to enable librarians to provide you more effective library services.

Please answer the questions and make any additional suggestion/s on the back of these pages or on a separate sheet of paper.

Your cooperation is appreciated and the information provided will be kept confidential.

1. Bio-data

Name.................   Qualifications.................

Status.........................

Area of specialization.......................

Specific field of research....................

Languages known (to be able to read literature)........................

2. Collection

21. Do you find reference collection strong enough to meet your demands...........

22. Give suggestions how the reference collection can be improved?...................

3. Reference service

31. Do you ask for assistance from the reference librarian or other members of the reference staff..............................

to locate books..................................

to search books...............................

to locate current periodicals...............

to seek information...........................

to understand the use of various tools..............................

      reference books.................................

      bibliographical publications..............................

      library catalogue..............................

32. Do you seek advice about your research project from reference staff at the stages of:

   (*i*) selection of research projects...........................

  (*ii*) preparation of a bibliography........................

 (*iii*) initiating work on it..............................

33. Do you ask for documents not available in this library (x) yes/no

34. How many times in the past 12 months did the library succeed in getting material from other sources?......................

35. How much time did it take to get the material on inter-library loan?...............

36. What kind of services do you expect from the reference section?...................

37. Give your impression and make suggestions for improvement in the services provided by reference section..

432 INTERVIEW METHOD

There are two approaches in this method. Either it may be done on the basis of a set of questions or in the form of natural questions.

A set of questions is given below, which can be used as a basis for discussion:

   (*i*) What are your needs for information in terms of amount, kinds and levels, variations in information needs at different times such as at the beginning, during and at the end of a research project?

  (*ii*) How do you get the information you need?

 (*iii*) Which types of publications do you use? (e.g. books i.e., monographs, handbooks, literature guides, journals, abstracts, indexes, reviews, research reports, advances in—, progress in—,

etc.) For what purpose do you use each of the type of publication?

(iv) Are you able to keep up with literature in your field? What the reference section can do in this regard?

(v) What services not now provided by the reference section would you like to be made available? (examples may be listed)

(vi) Give your impressions about reference service provided by the reference section.

Note. The above questions are directed towards researchers. Similar questions can be framed for other categories of users. The basic idea behind the above questions is to enable the user to talk freely about his requirements and make suitable suggestions.

433 ANALYSIS OF THE QUESTION

In case a record is maintained by the reference section about the questions asked by the users, then analysis of these questions can indicate about their requirements for information. The questions can be categorized on the basis of the sources of information used. This will give us a fairly good idea about their needs. The reference collection can be developed and organised on the basis of such an analysis.

434 COURSES OF STUDY AND RESEARCH PROJECTS ETC

In an academic library, courses of study, research projects and research programmes being undertaken can be very useful in knowing about users' needs. Similarly in a special library, the projects undertaken by the staff of the parent organization can throw good light on information needs. A reference librarian should know about research projects, research programmes, etc. at an early stage so that he can take steps to well equip the section in anticipation of the likely demands.

5 NON-USERS OF REFERENCE SERVICE

A reference section is supposed to serve all the members of a given library. There may be a number of users of a given library, who may not be using its reference services due to a variety of reasons. Large number of studies have been made about users of reference service but hardly any about non-users. Thus very little is known about traditional non-users of reference service. We can only make broad generalizations.

Let us try to find out who these non-users are? Very often, these

may include economically, socially, culturally and educationally disadvantaged people. In a developing country like India, libraries can play an important role in the social, political, economic and cultural development of the society. Thus, keeping in view the objectives and goals of a developing society, the disadvantaged people need to be given greater attention, so that they can gain their rightful place in the society. Those who are timid and have lack of confidence, would also either not use reference services or use these very little. Such persons would hesitate to disturb the reference librarian. There may be some persons, who may not approach reference librarian because they may feel that their questions are too elementary. Another group may consist of those who do not know what to expect from reference section. There may be users of library, whose requirements may be limited, so that they may not be required to use reference services. Take the case of an average student of a college, he would go to the college library mainly for textbooks, with the result he may be having no need for reference service. Similarly a user of a public library may go to the public library just to borrow any book on fiction or biography or travel, which may seem to interest him. Such a person would directly go to the shelves containing materials of his interest. He will pick up a book(s) from the shelf which may appear to be interesting. Such kinds of users would have no need for reference service. There may be those, who may have had an unsatisfactory experience of aid from reference staff, so that such users would not like to seek assistance any more.

It is not enough to set up a reference section and expect users to come to the library and use reference service. It should be the duty of reference staff to take steps to convert non-users into active users of reference service. Take the case of a shy or reluctant user. He would not ordinarily approach a reference librarian. A reference librarian should go out of the way to help such users. Suppose a shy or reluctant user is found struggling with the library catalogue or a reference book, then the reference librarian should approach him with a request, "Could I be of some help to you." It may require a special effort. In this respect, the motto should be to catch them young or at an early stage. In other words, a new member of a library should be given proper attention and an attempt be made to convert him into an active user of reference service.

6 CONCLUSION

In view of above, it is essential that a reference section should try

to ascertain the information requirements of not only users but also non-users of reference service. The methods to be used for this would include questionnaire and interview methods.

The question arises as to whether we should concentrate on those who themselves seek assistance rather than attempt to serve everybody. The aim of a reference section should be to serve the requirements of all those, who are members of the library. Ideally speaking, a reference librarian should spread his net wider and not make any distinction. However, in a public library in India, disadvantaged people should be paid special attention. These may be neo-literates or less educated or socially disadvantaged persons, who would require material in the language known to them. In North India, very often, it may be Hindi or Punjabi, in Tamil Nadu, it may be Tamil. Thus, the members of reference section, who are conversant with the local language should help in purchase and interpretation of materials for such kind of users.

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4 ORIENTATION OF A FRESHMAN

FOUR categories of users, namely—the freshman, the general reader, the ordinary inquirer and the specialist inquirer have been recognized by S.R. Ranganathan.[1] Accordingly, he perceived four aspects of reference service such as initiation of freshman, general help to general reader, ready reference service and long range reference service. Initiation of freshman is concerned with providing orientation to a new member. Orientation of a new member involves introducing him to the library—functions, services, rules and regulations, facilities, etc. Ready reference service and long range reference service are related to particular inquiries from users. Both have been discussed in Chapter Five. The residual matter comes under the purview of general help to general reader. The concepts of general reader and general help are vague ones, which are difficult to define.

1 NEED

A new member of a library may be termed a freshman. A freshman would not be familiar with the ways of that library. He would not know about rules, regulations and services of the library. The variety and size of a library collection especially in a large library can easily bewilder him. The tools (e.g., library catalogues, bibliographies, accession lists, reading lists, etc.) of the library assist the users in their use but these have an element of artificiality about them being based on conventions unfamiliar to them. It is not easy to understand the use of these tools. There are many peculiarities about the arrangement of documents, layout of various sections and the kind of services being provided. The provision of a system of guides and placards in a library is helpful but these are not sufficient by themselves. All this requires that some sort of orientation[2] for freshman to a library should be provided. Otherwise a freshman

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[1]S. R. Ranganathan, *Reference service*, 2nd ed., Bombay, Asia Publishing, House, 1961, p. 76.
[2]S. R. Ranganathan prefers to use the term initiation.

might feel inhibited in the use of a library. Orientation is concerned
with introducing library to freshmen so that they can use it in a
meaningful and effective way. The idea that orientation be provided
to users in how to use a library is generally accepted in practice.
Larger the library, the more essential it becomes.

2 ORIENTATION PROGRAMME

21 *Who should do it?*

The programme should be carried out by the reference staff. Due to
the very nature of their job, reference staff is best fitted to undertake
it. However in a small library, orientation will have to be done by
the librarian himself. Of course, in academic libraries, the librarian
will need the assistance of teachers in a direct or indirect manner.
However, in practice there is little integration between them.

A reference librarian responsible for orientation progamme should
be an experienced person, knowledgeable about library resources
and services. He should possess practical knowledge about the psy-
chology of users. He should be able to hold interest of the users.

22 *General Approach*

During orientation,[3] the users should be explained the following:

    (i) The characteristics of book and its various parts,
   (ii) Library functions, services and facilities,
  (iii) Library ethics including library rules, care of books etc.
  (iv) General arrangement of the library including provision of open
        access and close access sections,
   (v) Variety of collections and their location,
  (vi) The use of reference books including bibliographies,
 (vii) The scheme of classification being used,
(viii) The conventions which form the basis of the library catalogue,
  (ix) Taking of notes from documents, and
   (x) Compilation of bibliographies, etc.

The orientation should start with a short introduction followed
by a round of the library. During the course of introduction, the
reference librarian should explain the functions, services and facilities
provided by the library. He should hand over a copy of library rules
and other publications (e.g., selected list of reference books, a copy
of latest additions to the library, etc.) of the library. They should be
told that use of audio-visual aids like films, charts, diagrams can

[3]S. R. Ranganathan, *op. cit.*, pp. 81-83.

also be extremely useful. Although a copy of the rules may be provided to the freshmen yet most of them are not likely to read it carefully. Therefore, they need to be told about the rules and their implications.

On the round, the general arrangement, the variety and location of collections, basis of grouping of documents, use of catalogue and reference books can be explained by means of illustrations.

Orientation regarding library rules may be finished in the first visit itself. However, the initiation into classification and library catalogue may require two or three visits. At this stage, the new members may be given assignments involving use of reference books and the library catalogue. For instance, a college student may be asked to locate the following information:

(*i*) Which is the largest city in India?

(*ii*) What is the height of Mount Everest?

(*iii*) Find a biographical sketch of Mahatma Gandhi.

(*iv*) Where is Chicago?

(*v*) Select any five good books on rural India.

The best approach to orientation is to do it on individual basis. In a small library, especially a special library, approach on individual basis should be followed. However, in a large library like a university library, it may not be easily possible because enough staff may not be available for this. Therefore, the next best approach is to carry it out in small groups. A group should not normally exceed five persons. As far as possible, each group should be a homogeneous one.

Audio-visual techniques can be used for library orientation. But there is a difference of opinion about the use of these techniques. In any case, audio-visual methods of presentation are certainly not indispensable and essential for the success of an orientation programme.

We know that human beings are able to remember about 20 per cent of what they might hear and about 50 per cent of all they see and hear at the same time. Therefore, we may say that use of slides and/or transparencies well prepared to serve as illustrations for acquisition of skills can improve the process of learning. Experiments show that for basic information relating to the use of bibliographies, catalogues, indexes, abstracting services, repeatedly asked for by the users can be provided to individuals successfully by means of self-operated type of tape or slide/tape presentation.

Audio-visual presentations are useful when these are well chosen and prepared by professionals. However, the instruction should be provided by the reference staff. These should be regarded as support tools. Audio-visual programme is costly to produce. It may have to

be revised from time to time keeping in view the requirements. The librarians lack expertise to produce these programmes. Unless it is a work of quality, it is liable to fail.

Experience shows that learning-activity combined programme of the duration of about ten minutes can prove to be more successful than an audio-visual presentation for an hour or so. If it is possible to combine both, then it may prove to be an ideal combination. In a country, where resources are scarce, a well prepared and presented programme of learning-activity used along with a printed guide can be very effective.

During the course of orientation, a freshman should be provided as much information as he can easily absorb. It should be done in such a manner that the freshman finds it interesting. Explanations should be given with the help of examples taken from their field of interest. Here the practical knowledge of the psychology of users will be found to be of great help.

The reference staff should show cordial approach. The first impression can be a lasting one. The sympathetic and enthusiastic attitude of the reference librarian will make a user feel that a library is a social institution worth coming to. Thus a freshman will feel greatly encouraged to become a regular user.

23 School Library

Initiation programme should be integrated into the total educational programme. It can be related to class room work and laboratory work. Library hour can be utilized for the purpose of orientation.

During the orientation to students, the following items should be explained:

(i) Library functions, services and facilities,
(ii) Library ethics including library rules as well as how to take care of books,
(iii) General arrangement of the library including open access and close access,
(iv) The parts of a book,
(v) How to read a book,
(vi) Variety of collections and their location,
(vii) Use of reference books including bibliographies,
(viii) Scheme of classification being used, and
(ix) Conventions of the library catalogue.

Students should be given assignments as a follow up. The aim of the assignments should be to enable the students to use the library

effectively. The orientation should be done in such a way that the children are able to follow it and benefit to the maximum. The teachers can play an important role. They should bring the students to the library and assist the librarian in making the orientation programme a success.

24 College Library

The orientation should be planned carefully. It should be done at the beginning of each academic year. For each group in consultation with teachers, periods may be fixed for orientation. It would be desirable that a teacher should bring them to the library. In that case students would be willing to take advantage of the orientation programme. If it is difficult to get the students to the library for orientation, then the reference librarian should go to the classes and explain to them about the library and get them interested so that for further orientation, they may go to the library.

25 University Library

The clientele in a university library would mainly consist of teachers, research scholars and students. A large number of students would become members at the beginning of each academic year. They would have to be oriented in groups. Their orientation on individual basis would not be generally possible. Of course, in case of teachers and research scholars, it should be usually possible to give individual attention. Many of the persons, who become teachers and research scholars would not need orientation because they might have been members beforehand.

The approach to orientation in a university library should be similar to that of a college library. However, one should keep in view that many of the freshmen would already have used another library. Their level of attainment and subject background are other important considerations.

26 Public Library

A public library serves the public. The orientation programme should be carried out round the year. The freshmen will vary in age and background. The orientation should take into consideration these two factors. As far as possible orientation should be done on individual basis.

27 Special Library

A special library is usually a small library catering to a small group

of persons. Generally such a library specializes in a particular subject or group of subjects. Due to the very nature, it is possible to provide orientation on individual basis. However, very often a special librarian would be expected to provide information or documents) itself to the members, whereby there would be less need for such a programme.

3 INDIAN EXPERIENCE

Orientation of users is an accepted practice in Indian libraries but most of them do not perform it. Those who have a programme of orientation, very often carry it out in a half-hearted manner. Thus there are very few examples of successful orientation programmes being carried out in Indian libraries.

Some of the common reasons for failure of orientation programmes are given below:

(*i*) Disinterestedness of users (they may not be much interested in books),

(*ii*) Non-cooperation or rather lack of interest on the part of teachers in academic libraries,

(*iii*) Lack of time on the part of a user because he may be a busy person,

(*iv*) Lack of systematic approach on the part of reference librarian,

(*v*) Lack of the understanding of the psychology of users by reference librarian,

(*vi*) Half-hearted attempt, which could be due to lack of involvement by reference librarian,

(*vii*) Inability of reference librarian to carry out orientation programme on individual basis due to the problem of large numbers, and

(*viii*) Reference librarian may be too busy to be able to devote full attention to orientation programme.

Very often failure may be due to certain reasons which may be beyond the control of a reference librarian. In a large library like a university library, one may have to adopt group approach and groups sometimes may be as large as 20 or 25 students. Orientation to a large group of this kind may turn out to be less successful. In any case, one should try to determine the reasons for failure and find out a better approach for fulfilling the objectives.

4 CONCLUSION

Orientation should be considered an important aspect of a systematic attempt to train users in how to use a library. In ultimate analysis, this will enable users to use a library effectively. Systematic approach in this regard would lead to a sense of confidence among the users, which would be of a great help in using the library resources. Maybe it will make him ordinarily less dependent on the reference staff.

The best stage for orientation is at the school stage. This will go a long way in training him to use the library effectively throughout his life. In that case, when the child grows up and happens to use other libraries, he would need less of orientation and feel less inhibited in the use of a library.

The success of an orientation programme would depend upon planning, knowledge of the psychology of users and involvement of a reference librarian. Use of audio-visual resources like brochures (leaflets, circulars, printed guides etc.), films/slides on how to use a library, radio programmes, etc. should be made use of for the purpose. A combination of learning-activity programme used along with audio-visual presentation has proved to be the most effective approach.

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5 READY REFERENCE AND LONG RANGE REFERENCE SERVICES

0 INTRODUCTION

REFERENCE service means, "process of establishing contact between a reader and his documents in a personal way."[1] His documents refer to those which will serve his requirements precisely. It is a personal service, which involves various activities, aimed at making information available to the users as easily as possible. In order to provide information, a reference librarian may make use of resources of the library as well as those resources available outside his library. He may give information itself or the document(s) containing information, depending upon the requirements.

Ready reference service and long range reference service are two different aspects of reference service. Ranganathan used these terms in a well defined form. The distinction by him is very convenient and helpful. The description provided in this chapter is based on the writings of Ranganathan.

1 READY REFERENCE SERVICE

Let us try to understand what, why and how of ready reference service separately. The boundary lines between these are artificial. Sometimes, these overlap one another.

11 What

According to Ranganathan, "Ready reference service is reference service finished in a very short time in a moment if possible."[2] Thus the concept of ready reference service is based on duration of time. In case of ready reference service, the reference staff is able to answer the inquiry in a very short duration of time, may be at times immediately.

Some of the examples, which come under the purview of ready

[1] S. R. Ranganathan, *Reference service*, 2nd ed., Bombay, Asia Publishing House, 1961, p. 53.
[2] *Ibid.*, p. 189.

reference service, are listed below:

(*i*) What is the height of Mount Everest?

(*ii*) Who won noble prize in Chemistry in 1975?

(*iii*) What is the date of birth of Mahatma Gandhi?

(*iv*) What is the population of Poona?

(*v*) What is the address of American Chemical Society?

(*vi*) What is meant by symbiosis? and

(*vii*) What does IFLA stand for?

The above questions are such that the answers to these can b found readily within a short time. Therefore, these fall within th scope of ready reference service.

Ready reference service is more or less fact finding service Normally, sources of information used for fact finding consist o reference books of different types. These include encyclopaedias dictionaries, yearbooks, biographical dictionaries, geographical dictio naries, etc. The reference books are meant to be consulted and no read through like ordinary books. The information is arranged ir these so that it can be located readily.

Reference books should be supplemented by files maintained by the reference section and other sources of information. Reference sectior should maintain a press clippings file, a file on cards containing infor- mation collected from various sources, etc. However, reference books will form the main sources of information.

It is not always necessary to provide information from reference sources. In case the reference librarian knows something personally, he can furnish the information from his memory. Somebody may be looking for the address of a college. Maybe, the reference librarian remembers the address, then he can provide it from his memory. However, it may be kept in view that memory can some- times deceive.

The nature of ready reference service will differ from library to library. The members of a special library will be usually specialists, who would be busy persons. Bringing together of a user and a book would not be enough but a reference libraian would be expected to provide exact information sought by the inquirer. This would form one extreme of ready reference service.

In an academic library, the ready reference service would take another extreme. It would be expected that a reference librarian should try to educate students (who would form the majority) in the use of ready reference books rather than provide exact information. The stimulation of self help would be of basic importance in an academic library. Thus, here reference service would mostly consist

of assisting the user to help himself. More often, he would be directed to right kinds of sources rather than provided with the information itself.

Clientele of a public library is diverse in nature. It would consist of students, specialists, housewives, businessmen, etc. The treatment to be provided would depend upon the category of user and kind of information sought. Some of them would be given the information itself and in other cases, they would be directed to the right sources of information.

12 Why

A reference book is meant to be consulted and is not intended to be read through. Therefore, it is planned accordingly. In this way, a reference book is totally different from an ordinary book. An arrangement, subject, area and period of coverage of one reference book may differ from another one. The title may be misleading. An ordinary user may not be familiar with peculiarities of reference books. Therefore, he needs ready reference service to help him through.

In case of a query of repetitious nature, requiring long search, it is preferable that the answer should be provided readily rather than expect every inquirer to do long search on his own. This will certainly lead to national economy. Unless, it is a part of the assignment given to the students by the teachers or required for cross-word purpose or some other competition.

13 How

Here, we shall concern ourselves with the processes involved in the provision of ready reference service. How of ready reference service involves three processes, namely, preparation, service and assimilation. These cannot be regarded as completely separate ones. These overlap to a certain extent.

Preparation. Preparation is a process, which takes place behind the screen. A reference librarian has to begin his preparation even before the arrival of the users on the scene. Right kind of preparation can go a long way in making reference service a successful operation.

A reference librarian must become familiar with reference collection. He must regularly examine new reference books and new editions of reference books. He must maintain a file of fugitive materials (newspaper-cuttings, magazine-clippings, pamphlets, prospectuses, etc.) which should be weeded-out regularly. Fugitive materials are

of special importance in special libraries and public libraries.

Service. We may recognize the following kinds of services:

(*i*) Putting the inquirer along right lines, so that he can help himself,

(*ii*) Providing the inquirer with exact information,

(*iii*) Training the inquirer to find out facts on his own.

Regular users, who know how to find facts on their own, would sometimes require assistance to the extent that they can be set along a right track. For instance, a reference librarian could find out from such a user what he has already consulted. On this basis he could be further told as to what might help him. A hint of this kind could prove to be very helpful.

In case, a person sends his query through post or phone, then he would have to be furnished with exact information. Here the question of putting the person along right track would not arise. If the person is an important one, then it is just possible he would have to be provided information readily. In a special library, very often exact information would have to be provided because the user might be a busy person. A special library is different in this respect.

One of the services to be performed by a reference section is to train the inquirers in fact finding. This kind of training should be given special consideration in providing orientation to new users. There is greater emphasis on this in academic libraries. The users should be told about three stages in fact finding, namely, precise enunciation of the requirements, deciding search strategy (laying down line of action, as to which reference book is most likely to contain the required information) and final location of the information. The training should be given in a form, readily acceptable to the users.

Assimilation. Assimilation should be considered an important aspect of ready reference service. It is the process of absorption of information. Experience on the job is extremely helpful. Assimilation helps us to learn from our experience. At the time of preparation or providing reference service, a reference librarian should try to think of as to who can possibly benefit from the information being dealt at that time. Somebody might have asked for that piece of information earlier. It could be brought to his notice. Once information has been located, then if cosidered necessary, the information as well as the experience of locating information could be shared with other colleagues in the reference section. If it is a new piece of information or information difficult to locate or of special interest to many users, then it may be recorded. The same can be said about the experiences of locating information. If one notices weakness in the collection, then it should be brought to the notice of

the relevant section. Similarly, a reference librarian should share his experiences about public catalogue with cataloguing section. One can go on multiplying situations where assimilation of information on the part of a reference librarian can be a great help in improving library tools, collection and services.

2 LONG RANGE REFERENCE SERVICE

Long range reference service is a twentieth century phenomenon. It owes its origin to the modern concept of library service in libraries. Its provision varies from library to library. Long range reference service is a special feature of special libraries. However, it is not totally absent in other types of libraries.

21 What

We may recognize long range reference service on the basis of time involved, sources of information and the nature of information sought.

Time involved. As the name indicates, immediate satisfaction can not be provided in long range reference service. It is difficult to say as to how much time is required for search before it becomes long range reference service. However, according to Ranganathan, "few long-range reference questions take less than half-an-hour, while some take a whole day and even weeks."[3] This is a useful distinction.

Sources of information. In ready reference service, search is usually restricted to ready reference sources like dictionaries, encyclopaedias, yearbooks, biographical dictionaries, directories, etc. However, in long range reference service, the search starts with ready reference sources of information and is continued into ordinary books, periodicals, non-book materials, etc. In case, information is not located in the library, then search may be continued into resources of other libraries. If necessary, the search may be carried to libraries in the other parts of the world. In certain cases, if information is not available in recorded sources, then informal sources of information may have to be consulted. Thus in ready reference service, knowledge of reference books might prove to be more or less sufficient but same is not the case with long range reference service. For providing long range reference service, a reference librarian should know about developments and trends in the universe of knowledge.

Nature of information. In ready reference service, we are mainly

[3]*Ibid.*, p. 319.

concerned with facts. But in long range reference service, one has to deal not only with facts but also other categories of information. In case of ready reference service, information can be usually readily located in ready reference sources. But in long range reference service, it is not so. A prolonged search would be necessary.

Information sought may involve exposition of a problem from a particular point of view. 'Hindu view of life'. 'Role of mechanization in developing countries.'

Information sought may require systematic search in periodicals. 'Examples of application of operations research in Library Science.' 'Current developments in the manufacturing of airplanes'. 'Information gathering habits of chemists.'

Information may be too specialized. 'Advances in gas chromatography of steroids.' 'Studies on children's drawings as a measure of intellectual maturity.'

Information sought may involve an opinion or point of view on a particular idea. 'British and Indian point of view on 1857 War of Independence (India).' 'Relevance of Western culture for India.' 'Therapeutical claims of yogic practices.'

Information sought may be too recent so that it may not have been included in reference books. If an important event has occurred, then it would first get reported in newspapers and magazines. It would get included in reference books much later. Locating information about recent events in newspapers and magazines can be time consuming.

Information may be related to an earlier period, likely to be found in early works. For instance, 'Beggar problem in India during 18th century.'

Information may be collected from several sources of information. The query may be, 'why public library movement in India has not made a headway.' The answer may not be readily available. One may have to consult a few sources like books and articles in periodicals to get the relevant information.

Information sought might be available only in foreign language sources, which may require utilization of translation service.

Information sought might have appeared in a journal not available in the library. The same may have to be borrowed on inter-library loan.

Information may not be available in the library. It may have to be sought from another library or from an informal source of information. The question may be, "when was Calcutta University Library opened." In a given library, the available sources of information may not provide the answer. Therefore, an alternative would

be to write to Calcutta University Library and get the information.

22 *Why*

Increase in number and variety of documents. The amount of literature available today is vast, and this is especially true of science and technology. Not only is the amount of existing literature large but the rate of increase is also staggering, and is taking place at an unabated pace.

It has been estimated that the output of literature in pure and applied sciences doubles itself every five to ten years. In certain fields, the growth is more rapid than others. In chemistry, doubling has taken place in almost eight years. In the social sciences, and the humanities, the rate of growth is slower than in science and technology.

The problem exists not only due to the fact that information is increasing at a tremendous rate but also because literature is becoming polyglot (previously most literature was published in English, French, German and Russian but now other languages are also becoming important) and inter-disciplinary in nature and is taking on multiple forms (books, periodicals, microcopies, audio-visual records, etc.)

Due to the tremendous growth of knowledge, it has become even impossible today for an average scholar to be able to read everything of concern to him in his field of interest. The situation is such that very often, he is not even able to keep pace unless the field of his interest is too narrow or totally new or unless very little has been published in that area. This is true not only in the field of science but also in the social sciences and the humanities, due mainly to the great advances made by knowledge. The pile of information is increasing to such an extent that very often the search for information is like searching for a needle in a haystack. Therefore, one can well imagine the fate of a researcher. He needs to share the search for information with somebody. Reference librarian is the person who, by nature of training and experience, is best suited to share the burden.

Saving of time. Users would greatly appreciate reference service, if it can lead to saving of time. A research worker or an executive of a company or a senior officer of a government department are busy people, and are short of time. Therefore, if by providing satisfactory long range reference service, their time can be saved, that would go a long way in improving their efficiency. Very often a researcher may not have enough confidence in a reference librarian's

ability to help him in literature search. A reference librarian should be capable enough to understand the intricacies of his area of specialization. After experience, a reference librarian would reach a stage, when he would be able to do literature search even better than the specialist. When this stage is reached, then a researcher would realize the advantage of having a reference librarian to share his burden in making literature searches.

Peculiarities of literatures. The primary, secondary and tertiary sources of information (*see* Chapter 8), have peculiarities of their own. It is not always easy to get desired information out of these. For instance, indexing and abstracting journals are supposed to provide access to primary sources of information but these are not easy enough to use. Each may be following different practices in the arrangement of entries, provision of subject headings, preparation of indexes, etc. A reference librarian who understands their peculiarities can be of great help to a user of a library. This makes the provision of long range reference service essential.

Conclusion. With the passage of time, the need for long range reference service is being realized more and more. Research scholars, decision makers, executives of business organizations are beginning to realize that a reference librarian can be of great assistance to them. They are finding that much relevant information can be provided within short time by such a person provided he knows the job well. There is no doubt that with the passage of time, long range reference service will become most vital and prestigious aspect of library service in many of the libraries. This is already beginning to happen especially in special libraries.

23 How

According to Ranganathan, how 'of long range reference involves, "preparation, service and assimilation."[4] These are three processes of a single phase. These are not completely separable. One gets into the other.

231 PREPARATION

Acquiring knowledge of the subject. A reference librarian should first of all try to determine subjects of interest to the users of the library. For this purpose, he will have to conduct a users' survey. Having determined the subjects of interest, he should try to acquire a working knowledge of those subjects. For this, he should survey

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[4]*Ibid.*, p. 345.

literature of the subjects and read a few authoritative works in the field. We should keep in view that a librarian should attempt to become a literature specialist not a subject specialist. His aim should be to know about literature, so that he can locate information himself or assist the user in finding information, whatever may be necessary. He should know about the scope, interrelations, trends, developments, authors, institutions, etc., in the field concerned. The emphasis required within a subject would depend upon the nature of the clientele, kind of the library, and objectives of the library.

Scanning of sources of information. In order to prepare well, the reference librarian should scan the sources of information, always keeping in view the kind of users to be served and their information requirements. The sources of information would include books (other than reference books), reference books, periodicals, newspapers non-book materials. Depending upon the requirements, one can scan even unpublished materials like theses, mimeographed reports, etc. Scanning of bibliographies, indexing and abstracting services should be given a special consideration because there are extremely useful sources of information.

Gathering of information. A reference librarian tries to gather information on demand or in anticipation. On the basis of questions brought to the reference desk and the questions, which can be expected, a reference librarian should attempt to study the resources of the library and gather information in a systematic manner.

There are certain kinds of collections, which should be given special consideration for the purpose of information gathering. These include latest additions, current issues of periodicals, publications brought out by the parent organization, etc.

Latest additions would help the reference librarian to keep abreast of the latest developments and trends in the field of knowledge. These must be perused by him regularly. This must be done during the period, when latest additions are on display before their release. Similarly, he must scan the latest issues of periodicals.

A reference librarian should keep in touch with scholars and institutions, so that relevant information, which is not available in the library can be gathered from them. A reference librarian should approach them as a last resort. However, if the reference librarian believes that search within his library would take too long or there may be little possibility of getting the required information, then he can use the above sources of information.

Recording of information. Once information has been gathered, it should be recorded properly, so that it can be used effectively in

future. Recording should be done systematically ·so that later on required information can be retrieved quickly. Weeding of information is desirable because otherwise store of information can become unwieldy.

232 SERVICE

The mode of service will vary with the level of the inquirer. It will also depend upon the objectives of a reference section.

We may recognize three stages in the provision of service to the users. This would include precise enunciation of the requirement of the inquirer, search for the document and provision of the document to the inquirer. (For detailed description *see* Chapter 25.)

Enunciation of the requirements. It is important to do precise enunciation of the requirements of the users. The whole search process would fail to achieve the desired information unless the requirements are enunciated correctly. All the facets of the subject should be determined. The precise isolates belonging to each facet should also be ascertained.

Search for documents. The best approach towards searching of documents is to prepare mentally the class number for the subject brought up by the user. With the help of this class number, a reference librarian would be in a better position to search for documents or information.

Supply of document(s)/information. The next step is to supply the document(s)/information for the user.

In case the document(s) are not available in the library, then it may have to be got on inter-library loan. It is just possible that the documents may be in a language not known to the user, as a result a reference librarian may have to arrange for a translation. The concerned document may be in the form of an article and the user may like to have a copy for himself, then he should be provided a duplicate copy.

233 ASSIMILATION

A reference librarian should have an open mind. He would get immense opportunities to gain experience by coming in contact with users of diverse nature. However, he should be willing to absorb information and learn from his experiences. He should try to pick up knowledge and information as he goes along. One never knows, when a particular piece of information might be found useful. He should always keep in view, "to whom would it be useful?" It is essential that record of long range searches be maintained. This will

serve a useful purpose towards assimilation of information.

A reference librarian should try to share his experiences with his colleagues in the reference section. This can prove to be highly useful. During his work, he would discover certain weaknesses in the collection, the library catalogue, in the arrangement of documents, etc. On the basis of his experience he should make suggestions to his colleagues in various sections of the library to bring improvements. For instance, if there are gaps in the collection, a reference librarian should bring it to the attention of the acquisition section. If arrangement of documents on shelf is found unsuitable, then it can be pointed out to the technical section, so that necessary changes can be made to bring in the desired improvement. A reference librarian would be dealing with indexing and abstracting services prepared by outside organizations. He can point out their shortcomings to them. This is how a reference librarian can absorb his experiences into the system. This kind of assimilation can bring better results for long range reference service.

3 READY REFERENCE SERVICE *VERSUS* LONG RANGE REFERENCE SERVICE

We have already discussed ready reference and long range reference services in detail. We may put the same in the form of a table.

TABLE 1

Factors	*Ready reference service*	*Long range reference service*
Time	Between few minutes and half an hour	Few questions may take less than half an hour but some may take a whole day or even weeks.
Sources of information	Ready reference sources of information, namely, dictionaries, encyclopaedias, yearbooks, directories, biographical dictionaries, maps, atlases, handbooks, manuals, etc.	Search starts with ready reference sources but is continued to other sources of information like pamphlets, ordinary books, periodicals, unpublished documents etc. In case the resources of the library do not provide the required information then search may be directed to resources

| Nature of information sought | Here we are mainly concerned with facts | of other local libraries. If local libraries are not able to provide the answer, then search may be attempted to libraries in other parts of the country. May be libraries in other countries can also be explored. If required, the institutions and individuals (maybe scholars) can be contacted. A library in this context would also include information centres, documentation centres, etc. Here, the aim is to exploit all possible resources of information. The above is a description about the ideal situation.

Here we are concerned not only with facts but also other types of information. Information sought may involve exposition of a problem from a particular point of view. Information sought may require systematic search in periodicals. Information may be too specialized. It may involve expression of an opinion or a point of view on a particular idea. It may be too recent so that it may not have been included in reference books. It may be related to an earlier period, likely to be found in early works. Information could be such, which may have to be collected from large

number of sources of
information. The requir-
ed information may be
available only in foreign
language sources. It
may have appeared in
a source of information
not possessed by the
library but may have to
be borrowed from an-
other library.

The concepts of ready reference and long range reference services are relative ones. In a library with poor sources of information, even search for mere facts sometimes becomes long range reference service. Similarly due to lack of ready reference books on India, certain questions which should have ordinarily belonged to the category of ready reference would get converted into long range reference service. The same can be said about the capability of a reference librarian. An experienced and a capable reference librarian would be more successful.

If proper record of answers to queries belonging to long range reference is maintained, then next time, if the same or similar question gets repeated, help should be taken from the records. In this way long range reference service would get converted into ready reference. A good reference librarian should take maximum advantage of his experience and maintain such recorded information systematically. Similarly preparation on the part of a reference librarian is extremely important. For example, if a library is receiving many queries with regard to recent events, in that case maintenance of a press clipping file can serve an extremely useful purpose. This will help him to convert otherwise long range reference service into ready reference service.

4 CONCLUSION

Ready reference and long range reference services differ with respect to time, source of information and nature of information sought. In the first, it takes between few minutes to half an hour to render the service, the search is confined to ready reference sources and we are mainly concerned with facts. However, in the case of long range reference, a few of the questions take less than half an hour but some

may take a whole day or even weeks. The search starts with ready
reference sources and may continue into other libraries or institu-
tions. Sometimes, one may have to consult individuals. Here we are
concerned not only with facts but also with other categories of infor-
mation. In fact, we can go to the extent of saying that provision of
information on demand very often takes the form of ready reference
service but furnishing information in anticipation of demand often
takes the form of long range reference service. This may not be true
in many libraries. However, information once collected under long
range reference service can be used again in future. In that case, long
range reference service would get converted into ready reference
service.

From above, it should be clear that ready reference and long range
reference services are essential in a library. These will not be totally
absent in any type of a library. However, long range reference
service is a special feature of special libraries. There is every likeli-
hood that long range reference service will gain more prominence in
libraries in future. In India, long range reference service has been
greatly neglected. However, there is every hope, it will get the due
importance in the years to come. Provision of long reference service
can add to the status of librarianship

The success of ready reference will depend greatly upon the avail-
ability of reference books and knowledge of books on the part of a
reference librarian. Similarly for long range reference service, it is
essential that reference librarian should possess good mastery of
bibliographical organization and also familiarity with growth and
development of the universe of subjects.

FURTHER READING

S. R. RANGANATHAN, *Reference service*, 2nd ed., Bombay, Asia Publishing House,
    1961, parts F and J.
Seminar on Reference Service (Bangalore) (1971), *Working paper and proceedings*,
    Bangalore, DRTC, 1971, paper BA.

6 MECHANICS OF COMPILING AND ARRANGING BIBLIOGRAPHY

0 INTRODUCTION

A Reference Librarian has to prepare various types of bibliographies on demand or in anticipation. It is an important part of his job. Nowadays, full-time bibliographers are also being appointed for this job.

In this chapter, the description of compilation has been given keeping in view the requirements of librarians. However, it may also be found useful for subject experts who intend to compile a bibliography. Throughout this chapter the terms "bibliography" and "bibliographer" have been used in the broader sense. The description is equally applicable for the compilation of documentation lists by documentalists, with suitable modifications.

1 WHO SHOULD UNDERTAKE COMPILATION ?

Should it be undertaken by a librarian, or a subject specialist? For a long time the field of subject bibliography was dominated by subject specialists. Librarians have entered this field only recently. Compilation of a bibliography requires knowledge of the subject, knowledge about location , and evaluation and organization of documents. The last mentioned would require knowledge of classification and cataloguing.

A subject bibliographer will have good subject background but he will lack knowledge about organization of documents. On the other hand, a librarian is likely to lack subject expertise but would possess expertise in the organization of documents. A librarian with proper training in the art and science of bibliography and having practical experience of the proper kind is certainly better equipped than an ordinary subject specialist to undertake the compilation of bibliographies. However, a reference librarian should take the assistance of subject experts in certain matters.

2 PLANNING

Planning is the first stage in the compilation. Planning is of utmost importance and should be given proper consideration. The success of the job undertaken depends a great deal upon the attention given to planning. This involves the preparation of a provisional plan. It would be subject to modifications in the light of experience gained as the work goes on. Suppose, at the beginning, the compiler decides to compile a comprehensive bibliography but discovers later, that the amount of material is too extensive. Under these circumstances, he might decide to make the bibliography selective.

In order to do a good job, one should study both the technique of compilation, and the basis of good bibliographies, especially in the same field. One should also consult professional colleagues and subject specialists. It is desirable to consult research scholars and other users for suggesting areas in which bibliographies should be compiled.

The following are the steps involved in planning:

Definition of the subject.

Scope of the subject in terms of the coverage to be achieved by the bibliography.

Items of information to be included for each document.

Kinds of entries to be prepared.

Arrangement of entries to be followed.

Other adjuncts to bibliography to be provided.

Physical form on which entries are to be prepared.

Form of bibliography in which it is to be finally presented to users.

21 Definition of the Subject

Consult a dictionary, textbook or subject encyclopaedia on the subject to determine its definition.

22 Scope of the Subject

The scope of the subject must be determined in terms of comprehensiveness (selective or comprehensive), period, form of materials (books, articles, patents, etc.), languages, area, level of readers, taking into consideration the specific subject and its related areas. The scope of the topic must be decided as precisely as possible so as to avoid irrelevant items. However, the decision regarding the scope of the subject of the bibliography will depend upon factors like the demand of users, availability of resources and the requirements of

users.

Comprehensiveness or selectivity. The vastness of the subject, quantity of materials available in it, and the resources for compilation of a bibliography should be taken into consideration, while deciding the element of selectivity.

Period. Bibliographies are generally of two kinds, namely, current and retrospective. A current bibliography records the current output of the printing presses as soon as possible after publication, and a retrospective bibliography covers only past documents. After some time a current bibliography becomes a retrospective one. In case the subject is too vast or the amount of material available on a subject is enormous, it becomes essential to limit the period covered. That is, the period up to which material should be included should be decided.

Form of materials. There are different forms of material available like, books, periodical publications, articles from periodical publications, pamphlets, manuscripts, gramophone records, tapes, films, microfilms, microcards, etc. In practice, one is required to limit oneself in respect of forms of materials. Very often, bibliographies are confined to books. However, in the sciences, bibliographies usually take the form of documentation lists, where the emphasis is on including micro-documents. In the case of an author bibliography, personal bibliography or bibliography of locality, very often, manuscripts in the forms of private papers, or other unpublished documents may have to be included.

Languages. In the sciences, significant material is being published' in Russian, German, French and Japanese besides English. Therefore, a comprehensive science bibliography for research scholars must include material in these languages ,also. The same is true about other disciplines. The decision as to which languages should be covered is important because documents in less-known languages may be of no value to researchers unless translations are available or the material is significant enough for translations to be obtained or have it done.

Area. The area can be interpreted as either the area of coverage of the subject, or place of publication.

Level. It is essential to determine for whom the bibliography is intended. It may be for research scholars, general readers, school students or any other category of user(s).

23 Items of Information

The information about author(s), collaborators, full title, edition,

illustrations, bibliography, place of publication, year of publication, publisher's name and number of volumes (if it is a multivolumed publication) is the minimum that must be provided in the main entries. A strong case can be made for including an annotation or an abstract in certain types of lists. An annotation or abstract can vary in style. At one extreme, the aim might be to provide information and on the other it might be to merely draw the attention of the user to the document. It can be either long or short.

We may recognize two types of annotations, namely, descriptive and evaluative or critical and appraisal. A descriptive annotation consists of factual description regarding the intellectual content of the document. An evaluative or critical or appraisal annotation describes whether the aim of the author has been fulfilled or not. Besides, it compares the intellectual content of the document in hand with other writings on the same subject by evaluating the concerned document. The first type is used for library catalogues and the second is usually provided for book lists and similar works.

An example of an annotation

Parkhi, R. S., *Library classification: evolution of a dynamic theory*, Delhi, Vikas, 1972, p. 222, Rs 24.

The book is based on lectures prepared for the Fourth Sarda Ranganathan Lectures to be delivered at Documentation Research and Training Centre (Bangalore) in December 1968. Unfortunately the author died in October 1968. The author has described how theory of library classification has reached the present stage of development and has resulted in the formulation of a dynamic theory of library classification by S. R. Ranganathan. This theory is capable of providing us a methodology for the design of scheme for library classification. The second edition of Ranganathan's *Prolegomena to library classification* published in 1957 is considered as the first book on dynamic theory. The third edition of the same work published in 1967 is considered as an advanced version of this theory.

An abstract contains summarized information giving the objectives, scope and findings provided in the document. There are some people who consider abstracting an extension of annotation. In practice, annotations are added to books, and abstracts are given for articles.

An example of an abstract from Chemical abstracts

23973b. **Optical absorption spectrum of the solvated electron in some liquid amides and amines.** Gavlas, James F.; Jou, F. Y.; Dorfman, Leon M. (Dep. Chem., Ohio State Univ., Colum-

bus, Ohio). *J. Phys. Chem.* 1974, 78 (25), 2631—5 **(Eng)**. The optical absorption spectrum of the solvated electron (*es*) was detd. at room temp. in amides and amines. The absorption max. were as follows: DMF, 1680 nm; Me_2NCOMe, 1800 nm; Et_2NCHO, 1775 nm; Me_2NH, 1950 nm; and 1,2-propanediamine. 1500 nm. These results are not in accord with an empirical correlation proposed by G. R. Freeman (1973). The general spectral grouping of the absorption of *es* in a variety of lips. with type of compd. is discussed. Rate consts. were detd. for reactions of *es* in EtOH with H_2NCHO, Me NHCHO, and DMF: 1.8×10^8, 2.2×10^5, and 1.1×10^9 M^{-1} sec^{-1}, resp.

An example of an abstract from International political science abstracts

24. 4714 GOODWIN (G.L.)—**The erosion of external sovereignty**. *Govt and Opposition.* 9 (1), Wint. 76: 61-78.
The continuing stress on state sovereignty in diplomacy in international law is held to conceal a decline in the capacity of states to exercise that sovereignty in a world in which many ecological, economic, and social problems transcend national frontiers. Yet any such decline—which can easily be exaggerated—has usually led to an extension of the forms of collaboration between states rather than to an erosion of their sovereignty. Nor are states noticeably more "permeable" of vulnerable to informal penetration than in the past. Despite attempts at regional integration or the activities of multinational business corporations, the sovereign state remains the basic decision-making unit internationally and the problem is still how to fashion an international order premised upon its durability rather than upon its disappearance. [A]. (Revised) version of a paper presented at IPSA Ninth World Congress, Montreal, August 1973. [*See Abstr.* 4417].

There are varying forms of bibliographical references which can be made use of. In case the bibliography is going to be published, the compiler will very often have no choice regarding the form which will be decided by the publisher himself. As far as possible, one should follow the rules of a standard catalogue code and modify them to suit the particular requirements of one's bibliography.

It is preferable that the main entries contain the maximum items of information as enumerated above and other entries in indexes and elsewhere, be brief. For complete information the added entries should refer a user to main entries.

There is also a wide choice of standards which can be adopted for the purpose. Some of these are mentioned on the next page:

British Standards Institution, *Bibliographical references* (B.S. 1629: 1950).

Indian Standards Institution, *Recommendations for bibliographical reference* (I. S. : 2381-1963).

If any one standard is adopted, necessary modifications to suit the particular requirements should be made.

Periodical titles must be used in abbreviated form. There are international standards for abbreviations which can be adopted. Abbreviations used in *World list of scientific periodicals* is one such standard.

Illustrations for bibliographical references based on Indian standards *Recommendations for bibliographical reference*:

RANGANATHAN (SR). Prolegomena to library classification. 1957. Ed 2. Library Association, London. P 30.

LANDAU (Thomas), *Ed.* Encyclopaedia of librarianship. 1966. Ed 3. Bowes and Bowes, London. P 107.

VICKERY (BC). Classification Research Group. *Lib assoc rec.* 55; 1953; 187-8.

Illustrations for bibliographical references based on *Documentation on Asia*:

Neal, Fred Warner. US-Japan policy and disarmament. *Bulletin of the atomic scientists* 19 (9) : Nov. : 5-9.

Nehru, Jawaharlal. Note to the Congress Working Committee on charges of corruption against Chief Minister R. Shankar, New Delhi *31 October* Mimeo.

24 Kinds of Entries

It is essential to satisfy the approaches through author(s), collaborators, title (occasionally) and subject. Sufficient number of references should also be provided to take care of alternative approaches. We may satisfy the approaches by means of a single sequence (such as in a dictionary catalogue) or by having a main sequence and indexes.

Indexes are a must for a bibliography unless it is short (containing more than 40 or 50 entries) or arranged dictionary-wise. Usually author, title and subject indexes are needed. An author index includes entries for author(s), collaborators such as editors, translators, illustrators, etc. Title indexes are provided less often, though these are a must for author bibliographies and bibliographies in the field of literature. Subject indexes are provided in almost all bibliographies. Indexes refer to the main entries with the help of a serial number or a class number. Because the main entries provide maxi-

mum information, therefore, other entries are brief. Indexes should
be as detailed as necessary. Sufficient number of references should
be provided as a part of these indexes.

25 *The Arrangement*

The arrangement should be determined on the basis of subject,
purpose and the length of the bibliography. However, arrangement
of a bibliography for a researcher would be different from that for
a general reader. The kind of arrangement to be chosen should be
such that it saves time, energy and also convenient to the user.

Some of the possible arrangements are: (*a*) alphabetical, (*b*)
classified, (*c*) combination of alphabetical and classified, (*d*) chrono-
logical, and (*e*) annalistic.

Alphabetical arrangement by author. A bibliographer finds it easy
to arrange entries by author's names. A user of a bibliography also
finds it very easy to follow such an arrangement, but it has its dis-
advantages. It does not indicate the interrelations between different
aspects of a subject.

This method may be used in a brief bibliography appended to a
textbook or in a bibliography where users are likely to approach
through the author. We may follow one kind of arrangement (such
as subject arrangement or geographical arrangement or chronologi-
cal one), for main and subheadings as a primary arrangement, and
within each main and subheading, further arrangement (subsidiary
arrangement) may be alphabetical by author.

Alphabetical arrangement under subject headings. It is easily
followed by the reader. Such an arrangement does not indicate the
structure of the subject in terms of its divisions and subdivisions
or the interrelations between different aspects of a subject. How-
ever this drawback can be overcome to some extent by the intelli-
gent use of cross-references. Such an arrangement can be used
profitably for short bibliographies or when the concerned subject
cannot be subdivided further in a suitable manner.

The headings to be adopted can be worked out on the basis of a
list of subject headings, chain procedure or some other suitable
method.

Applied science & technology index is a alphabetical subject index,
which indexes more than 220 periodicals in different areas of science
and technology.

SAMPLE ENTRIES FROM APPLIED SCIENCE AND
TECHNOLOGY INDEX

DOPPLER effect

Gravitational parameters of the Jupiter system from the Doppler tracking of Pioneer 10. J.D. Anderson and others. Science 183:322-3 Ja 25 '74

Laser Doppler spectrometer for study of electrokinetic phenomena. E. E. Uzgiris. bibliog il diag R Sci Instr 45:74-80 Ja '74

Laser Doppler velocimetry; experimental study. C.P. Wang and D. Snyder. bibliog il diags App Optics 13:98-103 Ja '74

Lockheed S-3A avionics; single antenna coherent pulse Doppler radar altimeter. il diags Aircraft Eng 46:10-12 Ja '74

Microwave Doppler shift technique for determining solid propellant transient regression rates. L. D. Strand and others. bibliog diags J. Spacecraft & Rockets 11:75-83 F '74

Ray-tracing synthesis of HF radar signatures from Gaussian plasma clouds. P. B. Rao and others. bibliog diags Radio Sci 8:857-68 O '73

DORMITORIES

Traditional image for Olivetti; four designs by Richard Meier & associates. il plans Archit Rec 155:117-24 F '74

DOW chemical company

Dow reaps benefits from energy conservation. W. Worthy. il Chem & Eng N 52:25-6 Ja 14 '74

DRAFTING room practice

Modern drafting equipment boosts draftsman's productivity. G. Dallaire. il diags Civil Eng 44:64-7 F '74

DRAFTING rooms

Equipment

Automatic drafting unit accelerates pen at 2g. il Engineer 238:18 F 7 '74

Computer drafting saves drawing time, cuts costs W. K. Nonnenman. il plans diags Civil Eng 44:48-52 F '74

High-speed draughting machine. il Engineering 213:882 D '73

Modern drafting equipment boosts draftsman's productivity. G. Dallaire. il diags Civil Eng 44:73-7 Ja; 64-7 F '74

New gadgets for designers (cont). il Machine Design 45:223 D 13 '73; 46:150 Ja 10; 150 Ja 24 160 F 7; 172 F 21 '74

To get the best from draftsmen, give them proper furniture. il Product Eng 45:17 Ja '74

Management

Draughtsmen can improve design. A. A. Allen. il Engineering 213:891-4 D '73

DRAINAGE

Master planning methodology for urban drainage. H. F. Bishop. bibliog diags Am Soc C E Proc 100 (HY 1 no 10290) :189-99 Ja '74

Storm water management for residential land development. Pub Works 105:75-6 F '74

see also

Pavements—Drainage

DRAINAGE (physical geography)

Peach Springs tuff; its bearing on structural evolution of the Colorado

Plateau and development of cenozoic drainage in Mohave County, Ariz. R. A. Young and W. J. Brennan. bibliog maps diag Geol Soc Bull 85:83-90 Ja '74

DREDGES

Equipment on parade; excavating, dredging and loading. il Rock Prod 77:74-5 Ja '74

DRESBACHIAN biostratigraphy. See Geology, Stratigraphic—Cambrian

Author and subject entries arranged alphabetically: In *Humanities index*, author and subject entries are arranged alphabetically in a single sequence.

SAMPLE ENTRIES FROM HUMANITIES INDEX

DANCING

Carousel: A pictorial statement about dance's moods today. Dance Mag 48:37-43 Ja '74

Conversation with Alwin Nikolais; interview by R. Copeland. il Dance Scope 8:41-6 Fall '73

On marionettes, mimes, and dancers. W. Sorell. Dance Scope 8:47-51 Fall '73
See also
Ballet
Dance music
Jazz dance

Study and Teaching

Embrace tiger; there conferences get to the roots of choreography. D. Hering; B. D 'Anne; R.A. Thom. il Dance Mag 48; 34-6 Ja '74

Performer-teacher: an interview with Bella Lewitzky; by E. Moore. il Dance Scope 8:7-11 Fall '73.

Teaching of Louis Horst. T Dalbotten. il Dance Scope 8:26-40 Fall '73

India

Ritual as life [Kathakali, the Chinese opera and Meredith Monk] M.B. Siegel. il Dance Mag 48:76-7 Ja '74

DANCING schools

Directories

Dance directory. Dance Scope 8:56-61 Fall '73

DANDIES

Czech dandy: an introduction to Arthur Breisky, R. Pynsent. Slavon & E Eur R 51;517-23 O '73

DANDOLO, Enrico, doge of Venice, 1108-1205

Reorganization of the Venetian coinage by Doge Enrico Dandolo. L.B. Robbert. Speculum 49:48-60 Ja '74

D'ANNE Beverly

Embrace tiger: three conferences get to the roots of choreography; just one more day. il Dance Mag 48:34-6 Ja '74

DANTO, Arthur C.

Historical language and historical reality. R Metaphys 27:219-59 D '73

DARK Ages. See Middle Ages

DARWIN Charles Robert

Reception of Darwin's Origin of species by Russian scientists. J. A. Rogers. Isis 64:484-503 D '73

DASHWOOD, Sarah. See Walcot. S. D.

DAVID, Joseph Ben-, See Ben-David. J.

DAVIES, Thomas, M. Jr.

Indian integration in Peru, 1820-1948: an over-view. Americas 30:184-208 O '73

DAVIS, Glover

Dreaming bear [poem] Yale R 63:251 Wint '74

In *Humanities index*, entries for book reviews are provided in a separate sequence. The sample entries are given below:

BOOK REVIEWS

Mozart, W. A. Wolfgang Amadeus Mozart: neue ausgabe sämtlicher werke (series II, bühnenwerke, werkgruppe 5) Idomeneo: ed. py D. Heartz
Mus Q 60: 141-50 Ja '74, P. H. Lang

Mugridge, D. H. and H. F. Conover. Album of American battle art, 1755-1918
J West 12:7648 O '73 D. L. DeBerry

Muir, K Shakespeare's tragic sequence
Mod Lang R 68:891-2 '73. A. C. Sprague

Muller, A. V. ed. and tr. Spiritual regulation of Peter the Great
Russian R 35:451-2 '73. D. W. Edwards

Muncy, R.L. Sex and marriage in utopian communities: 19th-century America
Am Hist R 79:223 F '74. T.K. Hareven

Dictionary arrangement. In a dictionary arrangement all the entries (author, title, subject, etc) and their related references are arranged in a single alphabetical sequence like a dictionary. The subarrangement may vary frequently from strictly alphabetical sequence. *Cumulative book index* follows such an arrangement because author, title and subject entries are all arranged alphabetically in a single sequence.

SAMPLE DICTIONARY ARRANGEMENT FROM CUMULATIVE BOOK INDEX

Ethiopia
Curtwright. W. The hand of God in Ethiopia, $33.95 '74 Vantage.
Ethnic attitudes
Gibb. D. M. The making of white Australia. Aust $2 '73 Victorian Hist. Assn, 26 Milton St. W Melbourne 3003, Aust.
Ethnic groups of America : their morbidity, mortality and behaviour disorders.
Shiloh. A. and Selavan, I. C. eds. v2 $1 7.50; pa $12.95 Thomas, C.C.
Ethnology

Asia

Addresses. essays, lectures

Social organization and the applications of anthropology. '74 Cornell Univ. Press

Hawaii
Ellis, W. Polynesian researches: Hawaii. new enl ed pa $4 '74 Tuttle.

Quebec (Province)
Communities and culture in French Canada. pa Can $6.25 '73 Holt
Ethnomusicology
  Hamm C. E. and others. Contemporary music and cultures. $7.50 '75
    Prentice-Hall
Ethnopsychology
  Montagu, A. ed, Culture and human development. pa $2.95 (pa Can $3.25)
    '74 Prentice-Hall
Etruria

Antiquities
Banti, L. Etruscan cities and their culture. £5.50 '73 Batsford
Etruscan cities and their culture. Banti, L. £5.50 Batsford
Eugenics
  Dyer, K. F. The biology of racial integration. £12.50 '74 Scientechnica
Eurekal Roberts, S. V. $9.95 Quadrangle/The N. Y. Times Bk.

Classified arrangement. A subject bibliography compiled to serve
the requirements of a subject specialist should be arranged in a
systematic order based on a scheme of classification like *Dewey
decimal classification, Universal decimal classification, Colon classi-
fication* or any other scheme. Such an arrangement is called a
classified arrangement because the order is based on a scheme of
classification. Here all material on a given topic is collated and re-
lationships between subjects are displayed in a way more useful to
the user than any other kind of arrangement.

The usefulness of a classified arrangement depends upon the
qualities of the scheme of classification adopted, though indexes and
references can help overcome the weaknesses to some extent. Very
often, it happens that available schemes are not detailed enough or
that their arrangement is not suitable to the area of concern.

Due to the lack of a suitable depth-schedule, a bibliographer
may be forced to prepare a scheme of his own, which is certainly a
difficult job. One of the problems with classified arrangement is
how deep one should go. There is a difference of opinion on this
point. Some bibliographers are in favour of broad headings, while
others favour detailed headings. The depth in subject headings to
be used should be based on the requirements of users, for whom
the bibliography is being compiled.

In practice, classified arrangement is not sufficient by itself because
it fails to satisfy the author, title and subject approaches of a user.
However, the subject approach can be met if one knows the layout
of the scheme, which is normally too much to expect from an ordi-
nary user. Thus an alphabetical index consisting of author, title and

subject entrics in one sequence or separate alphabetical indexes consisting of thcse entrics arc a must. These indexes will cater to multiple approaches to thc material listed in the bibliography, and also supplement the main arrangement.

Sample entries given below have becn taken from *Documentation on Asia* (New Delhi, Vikas, 1974, volume 4) so as to illustrate the use of classified arrangement taken along with alphabetical indexes. In the beginning subject schedule (outline) has been givcn, which represents classified arrangement of the subjects. Next, main sequence of cntries in the field of economics arranged in a classified sequence on thc basis of subject schedule (outline) has been given. This is followed by subjcct and author indexes, which provide the alphabetical approaches through subject(s) and author(s). It is to be noted that cach entry in the main sequence has been allotted a serial number and the indexes refer to the main sequence of entries through these serial numbers.

SUBJECT SCHFDULE (IN OUTLINE)

Generalia
  Bibliography
  Research
Chronology
  Science
  Nuclear energy
Medicine
  Foreign assistance
Journalism/ Press
Military science
  Foreign assistance
  Defence and security
  Nuclear control
  Disarmament
  Armed forces
Art
Literature
Religion
Philosophy
  Ethics
Education
  Foreign assistance
Geography
  Migration
History
Political thought
Political questions
  Special political questions

Western bloc
Communist bloc
Afro-Asian countries
Commonwealth
Individual countries
Foreign economic relations
  Individual countries
Economics
  Theory
  System
  Policy
  System
  Common market
  Planning
  Price
  Production
  Distribution
  Transport and communication
  Industry
  Labour
  Management
  Trade

Party politics
  Political systems
    Democracy
    Nationalism
    Socialism, Communism
  Political parties
    Individual political parties
  Minority
Constitution
  Citizenship
  Fundamental rights and duties
  Federalism
  Election
Government
  Legislature
  Executive
  Administration
  Judiciary
  Local government
Foreign relations
  Border policy
  Colonial relations
  Non-alignment
  Peace
  U. N.
  Developing countries
  Recognition
  Outer space

Tariff
  Foreign trade
  Foreign exchange
  Money and finance
  Foreign assistance
  Foreign investment
  Public finance
  Agriculture
  Cooperation
  Rural economy
Sociology
  Rehabilitation
  Refugee
  Culture
  Community development
  Demography
  Group
  Family
  Tribe
  Rural sociology
  Commune
  Corruption
Law
  Contract
  International law
  Aliens
  Fishery

CLASSIFIED SEQUENCE

Economics

2867. Macapagal, diosdado. Interview with *Bangkok Bank Monthly Review. Far Eastern economic review* 41 (4) : July 25 : 216-17.

2868. Pillai, Gopinath. What Macapagal has done. *Far Eastern economic review* 41 (5) : Aug 1 : 291-4.

Policy

2869. Albano Delfin B. Speech in the House of Representatives charging the Emergency Employment Administration of colossal swindling of the peoples' money, Manila, *Feb 21. Congressional record* (Philippines, House of Representative) 2 Pt 1 (19) : Feb 21 : 571-3.

2870. Albert, Justo R. Speech in the House of Representatives on the need for a sound economic policy, Manila, *Feb 11. Congressional record* (Philippines. House of Representatives) 2 Pt 1 (11) : Feb 11 : 298-307.

2871. Millan, Luciano A. Speech in the House of Representatives on President Macapagal's socio-economic programme, Manila, *Mar 21. Congressional record* (Philippines, House of Representatives) 2 Pt 1 (39) : Mar 21 : 1226-32.

2872. Trivino, Juan F. Speech in the House of Representatives on the need of scrutiny of the socio-economic programme of President Macapagal, Manila, *Mar 6. Congressional record* (Philippines, House of Representatives) 2 Pt 1 (28) : Mar 6 : 857-65.

Price

2873. Millan, Luciano A. Speech in the House of Representatives on the rising prices, Manila, *Mar 1. Congressional record* (Philippines, House of Representatives) 2 Pt 1 (25) : Mar 1 : 744-9.

Transport and Communication

US (Agreement with—)

2874. Philippines and US Agreement relating to the relinquishment of US naval radiotransmitting facility at Bagobantay, Quezon, Manila, *Jan 11. United States treaties and other international agreements* 14 Pt 1 : agreement no 5289; Yorac, Haydee B., *comp., Philippine treaty series* 4: 637-8.

2875. Philippines and US Agreement regarding radio broadcasting facilities. Manila, *May 6. Treaty series* (UN) 477 : 67-99 (No. 6916); *United States treaties and other international agreements* 14 Pt 1 : agreement No. 5353; Yorac, Haydee B., *comp., Philippine treaty series* 4 : 709-24.

Industry

Coconut ·

2876. Chipeco, Joaquin E. Speech in the House of Representatives on the plight of the industry, Manila, *Mar 8. Congressional record* (Philippines, House of Representatives) 2 Pt 1 (30) : Mar 8 : 905-10.

Fishing

2877. Villasin, Primo A. Speech in the House of Representatives, Manila, *May 8. Congressional record* (Philippines, House of Representatives) 2 Pt 2 (64) : May : 1072-6.

Trade

Foreign

Export

2878. Philippines, House of Representatives. Debate on the bill imposing a levy on the peso proceeds of certain export products, Manila, *Apr 2. Congressional record* (Philippines, House of Representatives) 2 Pt 1 (47) : Apr 2 : 1594-1615, 1631-52.

Money and Finance

Policy

2879. Crisologo, Floro, Speech in the House of Representatives sponsoring the bill to assure the uniform value of Philippine coin and currency,

Manila, *Apr 30. Congressional record* (Philippines, House of Representatives) 2 Pt 2 (59) : Apr 30 : 594-600.
See also p. 592-4 for the text of the bill.

2880. Peralta, Vincente L. Remarks in the House of Representatives on the bill to assure the uniform value of Philippine coin and currency, Manila, *Apr 30. Congressional record* (Philippines, House of Representatives) 2 Pt 2 (59) : Apr 30 : 606-7.

FOREIGN ASSISTANCE

IBRD

2881. Philippines and IBRD Guarantee agreement (Development Corporation Project, Washington, *Feb 15. Treaty series* (UN) 478 : 161-203 (No 6936); Yorac. Haydee B., *comp., Philippine treaty series* 4: 643-66.

Germany (Federal Republic of-)

2882. Philippines and Germany (Federal Republic of-). Agreement on technical cooperation, Bonn, *Feb 5.* Yorac, Haydee B., *comp., Philippine treaty series* 4 : 639-42.

US

2883. Philippines, House of Representatives. Debate on the bill No. 5713 authorising the President to incur such debts from the Government of US as may be necessary to cover the budgetary deficit and other expenditure, Manila, *May 15. Congressional record* (Philippines, House of Representatives) 2 Pt 2a (68) : May 15: 1508-24, 1529-32.

PUBLIC FINANCE

Budget

2884. Macapagal, Diosdado. Budget message for fiscal year 1963-64, Manila, *Feb 12. Congressional record* (Philippines, House of Representatives) 2 Pt 1 (12) : Feb 12 : 325-44.

2885. Philippines, House of Representatives. Debate on the appropriations for the fiscal year 1963-64, Manila, *Apr 4, Congressional record* (Philippines, House of Representatives) 2 Pt 1 (49): Apr 4: 1658-1746, 1764-75, 1822-1915.

AGRICULTURE

Land Relations

2886. Castaneda, Constancio E. Speech in the House of Representatives opposing the land reform bill, Manila, *May 13. Congressional records* (Philippines, House of Representatives) 2 Pt 3 (67) : May 13 : 1171-3.

AUTHOR INDEX*

*The reference is to the serial number of the entry in the text.

SUBJECT INDEX*

*The reference is to the serial number of the entry in the text.

Chronological arrangement by periods. Chronological arrangement according to the periods on which the books are written is the most logical and useful arrangement for topics like history of a country, region or place. This is also useful in subjects involving the study of history or the development of a subject. However, very often the history of the development of a subject may have to be first divided into major subject aspects and within each aspect, further subdivisions may be made by period. For example, if the topic is "Developments in Physics during the 20th Century," physics would be divided into major aspects like heat, electricity and magnetism, light, sound, etc. Within each aspect further subdivisions can be made by period.

Annalistic arrangement. This is an arrangement by year of publication. Very often it is adopted within a given subdivision or

section. This enables a user to easily locate recent works on a topic. It may be used as a primary arrangement in certain cases. This would be so, if publications by a given press are listed or complete works of an author are sought to be listed in the order in which they were written.

Alphabetical versus *classified.* Alphabetical arrangement tends to scatter entries on related subjects. The use of an elaborate network of cross-references to coordinate related subject references is a kind of attempt at concealed classification, which is not fully successful. Besides, cooperation at an international level is limited due to the language barrier presented by alphabetical arrangement.

A classified arrangement of entries brings related items together. There is no need for cross-references to that extent. .

The success of classified arrangement combined with alphabetical indexes is demonstrated by bibliographies like *Indian national bibliography* and *British national bibliography.* Abstracting services like *Physics abstracts* and *Indian science abstracts* also use the classified arrangement successfully. There is no doubt that long bibliographies for research scholars are best arranged on a classified basis.

Arrangement of an author bibliography. An author bibliography can be divided into the following parts or sections:

(*a*) Books and pamphlets by the author arranged by date of publication;

(*b*) Contributions to books arranged by date of publication;

(*c*) Contributions to periodical publications arranged by date of publication;

(*d*) Books, periodical publications edited by the author arranged by date of publication;

(*e*) Translations of the author's works arranged first alphabetically by language, and within each language, by date of publication; and

(*f*) Books and pamphlets about the author arranged by date of publication.

Arrangement of a bibliography of a locality or city. The outline of one such arrangement is given below:

Administration, Architecture, Cinema, Culture, Education, Gardens, Geography, Graphic Art, History, Industry and Trade, Law and Order, Libraries, Literature and Language, Museums, Music, Painting, Politics, Religion, Sociology, Sports, Sculpture and Zoo.

The entries within each of the above headings may be divided further on the basis of the year of publication.

If desired, a classified arrangement based on a scheme of classification can be used instead of an alphabetical arrangement by subject as given above.

Comments. The last arrangement is the one in which documents can be located most easily. No one arrangement is suitable for all situations. Whatever the arrangement, cross-references must be given liberally but carefully. The scheme of cross-references should assist and not hinder the use of the bibliography.

The scheme of arrangement should be finalized after either the majority of or total material has been collected. One should examine the documents as well as the arrangement of bibliographies and read literature on the arrangement of bibliographies before finalizing the arrangement.

26 Physical Form of Entries

The entries should be prepared either on slips or cards of the size of $3'' \times 5''$. Cards are tough and can stand heavy wear and tear but are costly. Slips are cheap but cannot withstand heavy use. For a very large bibliography, slips are preferable. A notebook can also be used for this purpose but it has disadvantages, if the aim is to compile a lengthy bibliography. Therefore, it should be generally avoided. One card or slip should be used for one entry. This should be prepared on the front and an annotation or abstract should be given at the back.

27 Other Adjuncts

The following other adjuncts can be provided to a bibliography:

(a) Preface, describing the purpose, scope, limitations, history of the bibliography etc; (b) list of contents; (c) method of arrangement; (d) outline of classification used; (e) list of periodicals and other documents consulted; (f) list of abbreviations; (g) how to use the bibliography, giving examples of entries, explaining the items included in each entry; and (h) directory of publishers.

The particular adjuncts to be provided will depend upon the requirements of the particular bibliography.

28 Form of Final Presentation

Once the bibliography is ready, guide cards should be added to it. The final form of presentation of the bibliography may be on slips, cards or magnetic tapes. It may be typed, mimeographed or printed. The decision depends upon the number of users to be served and the amount of resources (manpower and finance) available for this

purpose.

3 SEARCH FOR DOCUMENTS

The starting point for any search for documents is a library cata-
logue. As a library catalogue indicates its holdings it would be a
good idea if one could make use of a library which has a specialized
collection on the topic. Usually, reference librarians or bibliogra-
phers employed by libraries compile bibliographies which contain
only those items that are available in that particular library. If one
aims to prepare a comprehensive bibliography, one should not
limit oneself to the collection available in a given library.

Before starting the actual work of search for material, one
should prepare a list of subject headings under which material is
likely to be found. For a comprehensive bibliography, one should
try to exhaust divisions as well as subdivisions of the topic and areas
related to it. This job should be done carefully, for otherwise one
is likely to miss much material. While searching, one should examine
the sources under direct as well as inverted headings to exhaust all
possibilities.

First of all, find out if a bibliography has already been compiled
on the given topic. For this consult library catalogues and general
guides to literature, bibliographies of bibliographies (e.g., *Biblio-
graphic index*, Besterman's *Bibliography of bibliographies*), and
bibliographic manuals (*e.g.*, Winchell, Walford, Malcles, Besterman).
It is just possible that a bibliography might already have been
compiled by some librarian, but may not have been published or
recorded anywhere. In order to learn of such bibliographies, one
should contact librarians in other institutions. Directories may have
to be consulted to ascertain the existence of such libraries, which one
may consult. If such a bibliography can be located, it should be
augmented to bring it to the desired level.

If a bibliographer is depended on accession lists and printed
library catalogues, the time-lag will be unreasonable. This requires
some sort of arrangement with publishers, which will go a long way
in getting information on documents, which have been published or
are likely to be published. One can also keep track of documents
which are likely to be published in the near future. In case a biblio-
grapher is attached to a library that is receiving documents regu-
larly, he can examine these personally.

4 SELECTION

Once having located the documents, it becomes necessary to select the items to be included in the list. If the aim is to compile a complete list then the question of selection does not arise. Often we find that the larger the field, the greater the need for selection. Selection depends upon the flair of the compiler and the requirements of the users for whom the list is being compiled. However, this job needs to be done very carefully. There cannot always be full agreement about what should be selected and what rejected. Only broad guidelines can be laid down in this regard. Each bibliographer will have to lay down separate and necessary guidelines for himself regarding each bibliography being compiled, after taking the necessary factors into consideration.

5 ENTERING

Once it has been decided to include a document, then an entry for it should be prepared according to the standard for bibliographic references or a catalogue code. Items of information as decided upon should be collected about each document. In case an abstract or an annotation is to be provided, it should be prepared at this stage. The subject headings and class numbers (if classified arrangement is to be used) to be allotted should also be decided upon at this stage. If the scheme of subject headings is inadequate, only provisional subject headings should be provided while entering.

If the subject headings and scheme of classification used are found inadequate to some extent then only provisional subject headings and provisional class numbers should be given. But the desired information required for finalizing these should be collected. Later, subject headings and class numbers can be finalized after all main entries have been prepared.

In case the adoption of existing schemes of classification or depth-schedules is ruled out, then a depth-schedule or general scheme of classification may have to be worked out to suit the local requirements. In such a case enough information about documents should be collected so that, as far as possible, class numbers can be finalized without examining the documents once again.

Once all the main entries have been compiled then necessary added entries and references should be prepared. Here it may be noted that once main entries are prepared, a typist can be instructed to type out added entries (brief or in full as desired) from the main

personally.

The form of citation varies a great deal but whichever form is adopted, must be used consistently. References have their own importance, and must be clear and accurate.

There is a great variety in the matter of arrangement. However, classified arrangement with alphabetical indexes has many advantages, provided one makes use of a good scheme of classification. Whatever main arrangement is adopted, it must be supplemented by indexes to provide for alternative approaches. However, the arrangement chosen must be that which is found most useful to users.

An exhaustive bibliography should give enough bibliographic details for each item so as to identify it sufficiently. The addition of descriptive annotation for books can be highly useful. Critical or evaluative annotation is still more useful. For articles in the form of micro-documents, the provision of an abstract will increase the value of the list.

A bibliography of rare books and manuscripts should also indicate their location.

Now a days, bibliographies are being produced from bibliographic data stored on magnetic tape, edited by computer programs and set in type by the computer-controlled photo-composition. *Indian science abstracts* uses computer to produce indexes.

The job of compiling a bibliography is a difficult one. It requires special efforts to achieve a bibliography which may be regarded as a work of scholarship. It needs a systematic approach, and requires knowledge of techniques and a perspective of the subject. The accuracy of details is of utmost importance, and must be given the greatest attention possible.

Each bibliography must have practical value. Users are paramount, and it must therefore fulfil their requirements.

FURTHER READING

ARUNDELL ESDAILE, *Manual of bibliography*, revised edition by Roy Stokes, 4th ed., London, Allen and Unwin, 1967, pp. 277-91.

D. J. FOSKETT, "Notes on compiling bibliographies," 2nd ed., *Education Libraries Bulletin*, supplement 2, 1967.

A.W. POLLARD, *Arrangement of bibliographies*, London, Association of Assistant Librarians (Section of the Library Association), Reprint, 1950.

A.M.L. ROBINSON, *Systematic bibliography*, 3rd ed., London, Bingley, 1971, pp. 18-77.

GEORG SCHNEIDER, *Theory and history of bibliography*, translated by Ralph Robert Shaw, New York, N.Y., Scarecrow Press, c. 1961, pp. 68-268.

found useful by the group of persons being served by him.

As said earlier, information service was started first in scientific and technical libraries because scientists and technologists were the first to feel the acute problem of increasing amount of literature. But today, other kinds of libraries are also beginning to provide this kind of service.

3 CONCEPT OF INFORMATION SERVICE

There are two aspects of information service. These are (*a*) Provision of information on demand, and (*b*) Provision of information in anticipation.

A user feels the need for information. He approaches the reference/information desk and makes a request for information by means of a specific query. He would be provided an answer to his specific query on demand. This would form first aspect of information service.

The second aspect aims to keep the users well informed and up-to-date in their field of specialization and also in the related subjects. This is called as dissemination of information or current awareness service. This is a very important feature of information service. It is certainly a special feature of special libraries or information centres or documentation centres. This aspect of information service will not be completely missing in other kinds of libraries, though it might get less attention.

Let us see, how dissemination of information can be done. Different kinds of publications are produced. These may include bulletins, annual reports, library catalogues, literature surveys, etc. The information included in these is slanted to the needs of the members of the parent body. Routing of periodicals and other documents is done. Besides, articles, books and other documents, are brought to the notice of those individuals, who may be interested in these.

4 INFORMATION SERVICE *VERSUS* REFERENCE SERVICE

Traditionally speaking information service and reference service are two different kinds of services. However, the borderline between the two is not very sharp. The differences between the two as described below are generally true. Sometimes, a service may be called information service but it may be nothing but reference service as understood traditionally. Vice-versa may also be true. *In this chapter, the*

information department. He is sometimes called by the name information scientist, documentation officer, intelligence officer, etc. Of course, sometimes, he may be called a reference librarian, though he may be providing information service in the sense described in this chapter.

52 Place of an Information Officer

He is an employee of an organization. He is an important member of the team engaged in research or activities of crucial importance to the parent body. We can go to the extent of saying that he is an indispensable member of his team. He holds high status within the parent organization.

53 What does He do?

His fundamental job is to provide information promptly, pinpointedly, exhaustively and accurately to any member of the parent organization. He provides information on demand and in anticipation.

54 Qualities

Because of the kinds of functions to be performed, an information officer should have high qualities and qualifications. Information service is certainly a vocation which demands a special attitude of mind and certain qualities which cannot always be acquired at will or through training. Therefore, everybody cannot possibly become a good information officer.

An information officer should possess the following qualities:

He should be brief, clear in thinking and possess good power of observation

He should possess a logical and analytical mind and be able to draw scientific conclusions on the basis of induction.

He should possess a fine sense of judgment.

He must have a personality of his own. An individual's personality is no less important than his academic and professional qualifications because instances are not wanting where a person with lesser qualifications has performed better on a job because of the personality factor. Personality is a by-product of environment during the childhood and adulthood and the subsequent career of a person is greatly affected by it.

He should possess a flair for accuracy of details and also not despise the matters of details.

He should be a natural psychologist, so that he can understand

Such persons were considered as members of the research team and expected to keep other members of the team up-to-date and well-informed.

Somehow traditional libraries and information centres have developed independently. The first being run by professional librarians and second usually being manned by subject specialists.

562 ARE THESE REALLY SEPARATE?

Information officers and librarians use the same type of tools, techniques and materials to search for information.

Information officers perform certain extra functions, which are mostly avoided by librarians because of the lack of staff or funds. Sometimes this may be due to lack of tradition.

As regards training, information service is an advanced librarianship. In the training of information officer, the emphasis is on advanced techniques and methods. We strongly believe that an information officer should be a literature expert but not a subject expert. However, some information officers feel that subject expertise is essential. Experience shows that a person with library/information science qualification employed as an information officer in an organization without possessing necessary subject background would face initial difficulties. If he is willing to learn, then within one year or so he would prove to be as good an information officer as a person possessing subject background as well as library/information science qualification. What is essential is that he should try to become a literature specialist. Information officers also believe that knowledge of library techniques is not essential for information work. An information officer without knowledge of library techniques in a small library or information centre would be able to do very well because he would know the collection thoroughly. He might prove even superior to a traditional librarian in providing information service but in a large set up mastery of library techniques would be essential. In such a situation, an information officer without professional training would feel handicapped. On the other hand a professionally trained person would have all the advantages and is likely to prove more successful.

There is no doubt that librarians are capable of providing the kind of information, which can be given by an information officer. But the cost of services will go up, which the library would not be able to afford. Therefore, most libraries are unable to provide information service described earlier.

The job of an information officer (sometimes called as information

In any national information system, libraries, documentation centres, and information centres should be integrated into a national network. The professional librarians shou'd actively participate in any such venture.

564 CONCLUSION

In libraries the emphasis is generally on directing the users to the sources of information and also instructing them as to how to use a library. However, in special libraries or information centres the emphasis is laid on finding information for the user rather than directing the users or teaching them as to how to use the library. The librarians need to change their philosophy and adapt themselves to the changing times. It is felt that the users require not only documents but also information. The reference librarians should keep this in view.

We have seen that the role of an information officer is extremely important. It has given new dimension to the field of library/information science. His work is being increasingly recognized. Librarians should also get into the field of information service. It will add to their prestige and status in the society.

Librarians and information officers have a common root and divergence has occurred mainly due to historical accident. An attempt should be made to unify them for the sake of providing better service to users.

6 DISSEMINATION OF INFORMATION

Information service has the following two aspects:[1]

(a) Dissemination of information that will keep its users well informed and up-to-date in their fields of basic interest as well as in their related subjects. This is also called current awareness service. Dissemination of information involves provision of information (or documents) in anticipation, so that information reaches those who are in need of it.

(b) Retrospective searching, which is concerned with provision of answers to specific inquiries. This has been described in detail in chapter 25.

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[1]D. J. Foskett, *Information service in libraries*, 2nd ed., Hamden, Connecticut, Archon Books, 1967, p. 79.

library. These inform about developments and trends in literature and research. These may also contain the developments and research programmes of the organization.

Some of the publications, which can be brought out are described below:

(a) It may take the form of a library bulletin (it is described in the next section).

(b) Libraries have also been issuing selective bibliographies depending upon the requirements of the users. These are extremely useful.

(c) Library catalogues may be brought out in full or parts. Due to the availability of newer methods of printing, there is a definite trend towards printing of library catalogues.

(d) Annual reports form another kind of publication. However, these have a limited value for the dissemination of information.

(e) Library guides can be brought out. A library guide provides details of services, which the users ought to know. However, it does not contribute directly to dissemination of information.

63 *Role of Indexing and Abstracting Services*

Due to the increase of available literature, an average scholar is usually unable to keep himself up-to-date with or sometimes even keep track of documents or information in his field of specialization. Take periodical publications, these contain useful articles on different subjects and very often give information on current events too recent to be found in books. But the number of articles appearing every year is so large that no specialist can possibly read all the articles of his interest. It is in this respect that indexing and abstracting services can play a very important role in keeping him well informed. These are organized sources of information called secondary sources, which refer the users to primary sources of information. The primary sources like periodical publications are difficult to use by themselves. Indexing and abstracting sources help in bringing information to the notice of those who need it rather quickly, and are extremely useful tools. The different disciplines usually have their own such services.

In a nutshell, we may list the following advantages of using indexing and abstracting services:

(i) These save time because these indicate what one should read,

(ii) These serve as a rapid survey of retrospective literature,

(iii) These help to some extent in overcoming the language barrier as abstracts may be given in a language known to him or these may use subject headings in the language he knows,

61 Importance

Dissemination of information is an essential aspect of information service. In special libraries/information centres/documentation centres, the greatest emphasis is laid on this service. It is also in this area of librarianship that special libraries are ahead of other libraries.

62 Ways to Provide It

Two kinds of services may be provided to disseminate information. These are enumerated below:

(a) Those services, where are directed towards individuals or groups of users. These may include circulation of materials in anticipation to individuals keeping in view their interests, routing of periodicals, selective dissemination of information (SDI), communication of information to individuals through informal conversation or via telephone.

(b) Those services, which are directed towards all users of the services. These may include accession lists, bibliographies, indexing and abstracting services, bibliographic surveys, literature surveys, etc.

For dissemination of information, an information officer (or reference librarian) examines every new document received in the library. The document may be a book or a pamphlet or an article in a periodical or anything else. Then he decides whether or not a given document is related to the work of any member of the organization being served by him. In case, it is so then either the document or the relevant information taken out of it is brought to the attention of the concerned user(s) at once. This may be done through informal conversation or telephone call or message sent to the concerned user to call at the information desk or the document (or relevant information) is sent to the user at his office.

Routing of periodicals is an important means of dissemination of information. In special libraries/information centres/documentation centres, very often bound volumes of periodicals are circulated but the current issues are routed.

Selective dissemination of information (SDI) is advanced kind of service directed towards individuals. This is a highly personalized service. The basic concept of SDI consists in matching of the information with the interests of the clientele. SDI has been described in detail in the later part of this chapter.

Another important means of dissemination of information is to bring out various kinds of publications. These aim to bring to the notice of users the activities and services of the information centre/

library. These inform about developments and trends in literature and research. These may also contain the developments and research programmes of the organization.

Some of the publications, which can be brought out are described below:

(a) It may take the form of a library bulletin (it is described in the next section).

(b) Libraries have also been issuing selective bibliographies depending upon the requirements of the users. These are extremely useful.

(c) Library catalogues may be brought out in full or parts. Due to the availability of newer methods of printing, there is a definite trend towards printing of library catalogues.

(d) Annual reports form another kind of publication. However, these have a limited value for the dissemination of information.

(e) Library guides can be brought out. A library guide provides details of services, which the users ought to know. However, it does not contribute directly to dissemination of information.

6.3 *Role of Indexing and Abstracting Services*

Due to the increase of available literature, an average scholar is usually unable to keep himself up-to-date with or sometimes even keep track of documents or information in his field of specialization. Take periodical publications, these contain useful articles on different subjects and very often give information on current events too recent to be found in books. But the number of articles appearing every year is so large that no specialist can possibly read all the articles of his interest. It is in this respect that indexing and abstracting services can play a very important role in keeping him well informed. These are organized sources of information called secondary sources, which refer the users to primary sources of information. The primary sources like periodical publications are difficult to use by themselves. Indexing and abstracting sources help in bringing information to the notice of those who need it rather quickly, and are extremely useful tools. The different disciplines usually have their own such services.

In a nutshell, we may list the following advantages of using indexing and abstracting services:

(i) These save time because these indicate what one should read,

(ii) These serve as a rapid survey of retrospective literature,

(iii) These help to some extent in overcoming the language barrier as abstracts may be given in a language known to him or these may use subject headings in the language he knows,

(*iv*) Classified listing can bring together documents on the same subject, which otherwise may be found scattered in journals, books, etc.

A survey of these services brings forth many problems, some of which are mentioned below:

Comprehensiveness. Comprehensiveness is an important objective of any such service. The volume of literature being produced makes it impossible for these to achieve comprehensiveness and currency. The language barrier comes in the way of both a specialist and compiler. Comprehensive coverage becomes difficult because certain publications are meant for restricted circulation or are not published at all.

Duplication. There are certain areas where these services are too numerous, causing much duplication and overlap. In certain cases, this kind of duplication may be necessary. Many of the documents abstracted in *Physics abstracts* are also abstracted in *Chemical abstracts*. This kind of duplication is necessary for the convenience of a particular group.

Gaps. Certain areas are either not covered at all or not adequately covered. We often find that important documents are omitted at every level of analysis due to oversight, to reduce cost of the service, lack of information, language barrier, etc.

Scattering of information on documents in one field. This may happen due to the inadequacy of the scheme of classification or inadequacy of subject headings used for arrangement of entries. However, it is also true that in some cases, the nature and kind of relations between subjects make it difficult to arrange entries in a fully satisfactory manner so as to bring out all the required relationships.

Incompleteness of information. In some cases, the details given may not be sufficient. If a service does not include annotations or abstracts, the value of that service is limited. If certain essential bibliographic details are not provided the value of that bibliographic tool is reduced.

Time-lag. Many services are too late in appearing. That is, there is too much time-lag between the publication of a document and its appearance in the bibliographical service. In this respect ventures produced by commercial organizations are much better. Due to the application of computers, bibliographical services have shown much improvement with regard to timeliness.

Lack of selectivity. Some bibliographies try to include everything on which their compilers can lay their hands. Thereby such services

lack selectivity.

Too expensive. The cost of certain services has increased to the extent that they are out of the reach of a library with a limited budget. For example, this is the case with regard to *Chemical abstracts*, *Science citation index*, etc.

Lack of coordination. This is another weakness of the present bibliographic organization. Cooperation and sharing of responsibilities are required at all levels, for its elimination.

7 CURRENT AWARENESS SERVICES

Dissemination of information that will keep its users well-informed and up-to-date in their fields of basic interest as well as in the related subjects is called current awareness service. This is one of the most important functions of any information service. Current awareness service involves review of, "publications immediately upon receipt, selecting information pertinent to the programme of the organisation served, and note individual items to be brought to the attention, by one means or another, of those persons to whose work they are related."[2] Publications to be reviewed may consist of books, periodicals, reports, patents, announcements of different kinds. After selection of pertinent information, a systematic record is made of significant references. In some of the documentation/information centres, these records are accumulated to be issued as bulletin on periodical basis.

Once pertinent information has been selected and a systematic record prepared, then by suitable means, the information is communicated to users by the means given below:

(*i*) Telephone call is made to individuals (either information may be passed on or a request made to call at the reference desk to get pertinent information maintained by their formation/documentation centre on cards).

(*ii*) Message sent on notification form to the individuals through a messenger or post to call at the information desk.

(*iii*) Pertinent information sent to the user at his office.

(*iv*) Routing of periodicals (certain articles can be marked to draw the attention of individuals).

(*v*) Prepare a local library bulletin and distribute it periodically (A library bulletin can take variety of forms. It can take the form

[2]Pauline Atherton, *Handbook for information systems and services*, Paris, Unesco, 1977, p. 149.

of table of content of periodicals received in the library).

(*vi*) Provision of Commercial SDI (Selective dissemination of information) service, often computer based (this service can be subscribed).

Current awareness services listed above are directed to the users as a whole or in groups.

'71 *Routing of Periodicals*

Routing of periodicals is an important means of dissemination of information. In special libraries or information centres, very often the bound volumes of periodicals are circulated but the current issues are routed. There are two main systems of routing the current issues of periodicals. In the first method, the library sends the current issue to the first person on the list, who passes it on to the next name in the list, ultimately the last person returns it to the library. In the second method, the library sends the issue to the first persons on the list, who returns it to the library, then the library sends it to the next person on the list, who returns it to the library. Next the library sends it to the third person. This is how the system goes on.

Before the current issues of periodicals are issued, the reference librarian/information officer/librarian can scan these and mark certain articles to draw the attention of individuals.

72 *Current Awareness Bulletin*

It may take the form of a library bulletin. It can be in the form of a news bulletin giving items of current general information or a list of recent additions or list of contents of periodicals or indexing periodical (list of articles from periodicals arranged alphabetically under subjects or classified-wise) or abstracting periodical or a digest of recent information or bibliographic survey (survey of bibliographical sources) or literature survey or any combination of these. In addition, it may include activities and services of the library/information centre/documentation centre. Very often, it will include developments and research programmes of the organization.

It may be mentioned that most simple form of a library bulletin is a list of recent additions. List of contents based on periodicals is a quick and cheap method. It is becoming more popular. Sometimes, it is used as an alternative to routing of periodicals. In many of the areas especially in science and technology, there are excellent international indexing and abstracting services but these are very often late in coming, therefore, local indexing and abstracting services (another name is a documentation list) may have to be brought out.

Very often these services may be found more useful because these are tailor made. Another very useful publication is the digest of scientific, technical and industrial information. Literature surveys on specific topics are considered extremely useful.

The scope of the bulletin depends upon the needs of the organization and the resources made available to the information centre/ documentation centre.

73 SDI

Selective dissemination of information (SDI) is advanced kind of service directed towards individuals. This is a highly personalized service. The basic concept of SDI consists in matching of the information with the interests of the clientele.

74 Conclusion

The volume of publications has increased tremendously so that a scientist or a manager finds it difficult to review regularly the large number of publications of his interest. It is in this context that current awareness services play an important role.

8 SELECTIVE DISSEMINATION OF INFORMATION

8 L The Concept

Selective dissemination of information (SDI) is based on the concept of personal service. It is one of those services, which are directed towards individuals so as to cater to individual requirements. It is a refinement of the idea of current awareness service. H. P. Luhn is a pioneer in this field. According to him, "SDI is that service within an organization which concerns itself with channeling of new item of information from various sources to those points within the organization where they can usefully serve someone's interest. It endeavours to prevent indiscriminate distribution of new information and avert the resulting danger of not communicating at all."[3] The definition of SDI has been quoted from an original article on SDI. This explanation of the same is relevant even today. The basic concept behind SDI consists of matching information/documents with the profile (interest) of each individual of the clientele. The profile can be of a single user or a group working on the same project or

[3]H.P. Luhn, "Selective dissemination of new scientific information with the aid of electronic processing equipment," *American Documentation*, 12 (1), 1961, pp. 131-8.

some limited subject field. Those items which match are brought to the attention of the user. In case, a computer is available, then this service can be performed effectively. The aim being that user should neither be provided too much of information nor made to miss information essential towards his requirements. Too much of information would make it difficult for him to use information effectively.

SDI service can be completely prepared by the local library or it can be bought in parts or the whole from the commercial organization or profiles for individuals or groups are bought.

82 *Computer-based*

The concept of SDI is not a new one. Librarians have been providing this kind of service on manual basis for a long time. During recent years, the trends is towards computer based SDI.

During the last few years information officers (reference librarians) had to face the following problems:

(*i*) The volume and variety of literature being published in various fields especially in science and technology became enormous.

(*ii*) The information officers (reference librarians) found it difficult to know all the interests of the users being served by them. Very often the interests kept on changing.

Due to the above problems, the matching of content of documents with the interests of the users to be done manually became very difficult. Therefore, H.P. Luhn suggested a machine system for handling a large scale work of matching. Thus he designed a system with the aid of electronic processing equipment at IBM.

During the recent years, computers and punched cards equipment have been used to mechanise the procedure for matching the interests of users with the contents of documents. There is no doubt that for a successful operation, SDI should be a computer-based one. However, if it is a small-scale operation, then manual operation might work not otherwise.

83 *Steps*

(*i*) The first[1] step consists of creating profiles of the users, who are to be given SDI service. A profile consists of keywords that collectively characterize the subject interests of an individual or organization. These profiles go to make register of interests. The aim of creating profiles is to define the topics of interest appropriately so

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[1]T.D. Wilson and J. Stephenson, *Dissemination of information*, London, 2nd ed., Clive Bingley, 1969, pp. 29-30.

as to be able to translate these (the interests) into machine-readable queries.

A. S. Raizada[5] has described the following steps for creating a profile:

Gather profile information, identify the topic, select the suitable data base, determination of access points, determine the concept, expand the concept map, filling the worksheet, check the profile, SDI bulletin format.

Gathering of information for a profile is an important step. It should be undertaken rather carefully. A proforma (profile card) is designed for the purpose. A user is requested to fill up the proforma. The proforma should include the columns regarding full name, qualifications, status, phone number, name of the institution, address, area of specialisation, languages known (to be able to read literature); description of topics of interest with detailed description including aspects to be excluded (to be given in narrative form), relevant section numbers from an abstracting service in which abstracts on topics of interest are most likely to be found; keywords and synonyms to represent topics of interest (the keywords and synonyms should be based on an index or a standard glossary or a thesaurus based on conceptual relations of words), weight or value of key terms to be used in the choice of information and documents; a list of at least five titles of relevant papers pertaining to literature relevant to the topic(s).

Note. Weight indicates the significance of a given specification on a pre-established scale. Suppose, the scale consists of numbers 1 to 3. Let us say that user is interested in Cataloguing. Then a document dealing with Cataloguing would get weight 3. A document concerned with library science would be given weight 2. Similarly a document on teaching of library science would be barely relevant and would get weight 1.

Next define the topics of interest of the profile so that the search editor knows the specific interests of the user. S.R. Ranganathan's techniques of facet analysis and facet formula for a host class can be useful in this regard.

Select the most appropriate data base(s) likely to serve the needs. This will depend upon coverage of the topic and timeliness of the data base.

⁵A.S. Raizada, *CHEM/SDI; a pilot project for SDI in chemistry and allied disciplines*, New Delhi, Indian National Scientific Documentation Centre, 1976.

PROFILE CARD

A 1. Name ....   2. Qualifications ....

   3. Status ....   4. Phone number ....

   5. Institution ....

   6.Address ....

   7. Area of specialization ....

   8. Languages known (to be able to read literature) ....

B 1. Topic(s) of interest with detailed description including aspects to be

   excluded ....

   ....

   ....

   2. Relevant section numbers from an abstracting service (such as *Chemical
      abstracts, Physics abstracts, Biological abstracts,* etc.) in which abstracts on
      topics of your interest are most likely to be found ....

      ....

C 1. Keywords and synonyms, which represent topic(s) of your interest (avoid

   general terms)...

   2. Indicate weight or value of key terms to be used in the choice of information
      and documents to be supplied to user (Scale consists of number 1 to 3:
      3 Major key term; 2 Minor key term; 1 Barely relevant key term) giving

      suitable numbers ....

      ....

      ....

D 1. List of *at least five* titles of relevant papers pertaining to literature relevant

   to topic(s) of your interest...

   ....

Determine the approach points offered by the data base selected above.

Determine the unique concepts and their relationships from the description in the narrative form provided by the user. This will lead to a diagram in the form of a concept map, displaying how different concepts are related. There would be as many concept maps as many concepts identified.

Next determine the synonyms, variant forms, abbreviation, etc., from glossaries, thesauri, classification schemes etc. This will lead to expanded concept map.

In the next stage filling of the worksheet is done. On one side of worksheet data is filled in on the basis of the information provided by user concerning, name, address and phone number of the user; narrative statement concerning topics of interest; sample references. The second side of the worksheet is meant for coding the profile.

At this stage, it is essential to check the profile for errors, which might have occurred at the stage of typing or coding.

(*i*) The profile obtained thus must be kept up-to-date. Therefore, if the topic(s) of interest changes, then corresponding profile must be modified accordingly.

(*ii*) Next the information profile is punched and processed by computer. The profile becomes the input.

(*iii*) Each document received by the information centre is scanned and indexed. If necessary, relevant information about the document is prepared (which may be in the form of an abstract or an extract). Proper subject analysis of documents is extremely important for the success of SDI. Depending upon significance of the document, (i) the bibliographical details and indexing terms or (ii) the bibliographical details, information itself and indexing terms are stored on the magnetic tape. This becomes second input.

(*iv*) At a predetermined stage the computer compares the two inputs. The output is printed out in the form of two punched cards. One punched card is called *information card* (contains either the list of documents or the information itself along with bibliographical details of document(s), which also has a tear-off strip request note. The other punched card is called *response card*.

(*v*) The two punched cards are sent to the user, whose interests match with the document or information. The user keeps the *information card* for his use. In case, he wants to consult the document, he tears off the request note strip and sends it to the library. He also returns with it the *response card*, in which he indicates the degree of interest in the particular document(s).

(*vi*) The library takes action on request note strip to send the document(s) to the concerned user or keep it in the library for him. The response card is used to update the profile of the users, so that the service can be made more effective. Response card serves as a feedback system, which helps the library to know about the usefulness of the information provided as well as change in the interest of the users. Thus, after analysing the feedback, one should make modifications for change of interest of the users and for improving the performance.

91 CONCLUSION

Thus, we have seen that information service has its importance especially in science and technology. The prestige lies in this area. Therefore, librarians should get into information service on a large scale and attempt to bring so called information officers into their fold. The librarians should not remain merely busy with traditional reference services but should try to provide current awareness services on a large scale. The preparation of documentation lists, production of accession lists, state-of-the-art reports, circulation of periodicals, display of items, etc., are some of the means and ways, which can be made use of to provide current awareness services. In addition, reference librarians should lay greater emphasis on provision of information itself than the documents. More attention should also be given to long range reference service.

Out of the various current awareness services, bibliographies and bare documentation lists are very often relatively cheaper to produce and require less degree of expertise. But information provided may not prove to be sufficient. Therefore, abstracts may have to be added to make these more useful. However, for many purposes, a state-of-the-art type review of literature prepared to meet the special requirements of a group of users can be very helpful. Such a review can also cover unpublished documents and personal communication. This is an important aspect of information service provided in special libraries, information centres/documentation centres.

FURTHER READING

K. G. B. BAKEWELL, *ed., Library and information services for management*, Hamden, Connect., Archon Books, 1968, pp. 91-102.

W. E. BATTEN, *ed., Handbook of special librarianship and information work*, 4th ed., London, Aslib, 1975, Ch. 10.

P. J. BORDISS, "Presenting search results to meet specific user needs," *Aslib Proceedings*, 26, 1974, pp. 468-72.

THOMAS CHILDERS, *Information service in public libraries*, Metuchen, N.J., Scarecrow Press, 1971.

RICHARD S. COSMANN, "Selective dissemination of information: a state of the art for the past five years", *Libri*, 27 (no. 2), 1977.

P. S. DAVISON, "Selective dissemination of information," *Research in Librarianship*, 5, 1974, pp. 5-31.

D. J. FOSKETT, *Information service in libraries*, 2nd ed., Hamden, Connect., Archon Books, 1967, Ch. 1, 2, 3, 8, 10.

B. GUHA, "Indian current awareness services," *UNESCO Bulletin for Libraries*, 22, 1968, pp. 73-81.

S. KASIVISWANADHAM and A.S. RAIZADA, "CHEM/SDI profiling," *Annals of Library Science and Documentation*, 23 (no. 3), 1976, pp. 223-234.

WILLIAM A. KATZ, *Introduction to reference work*, 2nd ed., Vol. II, New York, McGraw-Hill. 1974, pp. 3-20, 56-57, 203-205.

L. T. MORTON, *Use of medical literature*, London, Butterworths, 1974, Ch. 5.

C. C. PARKER and R. V. TURLEY, *Information sources in science and technology*, London, Butterworths, 1975, pp. 139-155,204-210.

A. S. RAIZADA and F.J. DEVADASSON, "CHEM/SDI service," *Annals of Library Science and Documentation*, 23 (no. 2), 1976, pp. 179-188.

T. WHITEHALL, "A future for the bulletin?" *Aslib Proceedings*, 25, 1973, pp. 34-45.

T. D. WILSON and J. STEPHENSON, *Dissemination of information*, 2nd ed., London, Clive Bingley,1969.

8 SOURCES OF INFORMATION

0 INTRODUCTION

LITERATURE of a subject is its foundation. It represents a record of achievements of human race. Literature is diverse, complex and multilingual in nature. It is becoming more and more inter-disciplinary. It is growing at a fast pace: In sciences, it is almost doubling itself between five to ten years. In social sciences, it is doubling at the rate of every eight to twelve years. Literature serves the informational needs of various kinds of users. It forms source of information.

Traditionally speaking, information sources would include primarily books, periodicals, and newspapers. However, the number and forms of sources are continuously increasing. Even unpublished sources are becoming increasingly important to scholars. Occasions will arise, especially in a special library or a university library, when information would be required by a user without pre-condition about the form of document. In such a situation, what matters is the finding of information not the source of information.

We may recognize the following kinds of sources of information: *Documentary sources*. Primary, secondary and tertiary sources—(The primary sources are the first to appear. Secondary sources come out next. The tertiary sources are the last to appear). *Non-documentary sources*. Formal and informal.

It may be mentioned that the use of above terms is not always clearcut. In practice, the usage may vary sometimes. In the following pages, various kinds of sources of information have been explained and suitable examples have been given, where necessary.

1 PRIMARY SOURCES

Primary sources of information are the first published records of original research and development or description of new application or new interpretation of an old theme or idea. There are original documents representing unfiltered original ideas. These constitute the latest available information. A researcher producing new informa-

tion can make it available to the particular community through the primary sources. Often, it may be the only source of information in existence.

Primary sources are unorganized sources, which are rather difficult to use by themselves. The secondary sources help us to use these.

These are important sources of information. A subject becomes a discipline in its own right when independent primary sources begin to be produced in that area. The rate of growth of a discipline to a large extent depends upon the amount of literature being produced in the form of primary sources reporting developments in the concerned field.

These aid the researchers to:

(a) keep up-to-date and well informed of the new developments, (b) avoid duplication in research, and (c) help others to build on this by means of further work and thus generate more information.

Primary sources are published in a variety of forms. Normally these take the form of a journal article, monograph, report, patent, dissertation etc. Some of these may be unpublished. These are described below:

11 Periodicals

Periodicals include, journals, bulletins, transactions, proceedings or similar works, which appear regularly and continuously in numbered sequence. However, the newspapers and annuals are excluded. The bulk of primary source literature appears in the form of periodicals. There are many periodicals which are exclusively devoted to reporting original research. The periodical article is the main means of communication for the exchange of scientific information. The same can be said about many other areas of knowledge. It may be pointed out that an article in a journal would be considered a primary source if it contains information representing original thinking or a report on a new discovery of something. However, an article in the same journal would not be considered a primary source of information, if it were to contain summary of findings of others or reports produced by other persons.

Information contained in periodicals is almost invariably more up-to-date than that appearing in books. Periodicals usually report the results of recent researches more quickly than books. Information on new processes and discoveries can appear in a periodical within weeks of their formulation. However, the same might take two to three years before the same can appear in book form.

If all the information appearing in periodicals was also covered in books then libraries would no longer be expected to maintain long files of back volumes of periodicals. The experience shows that most of the material reported in periodicals is never published in books.

EXAMPLES: *Historical Journal*, 1958-, New York, Cambridge University Press, Quarterly.

Nature, 1899-, London, Macmillan, Weekly.

Physics of Fluids, 1958-, New York, American Institute of Physics, Monthly.

Phytochemistry: an International Journal of Plant Biochemistry, 1962-, Oxford, Pergamon Press, Monthly.

12 Research Monographs

Research monographs are "separately published reports on original research that are too long, too specialized, or otherwise unsuitable publication in one of the standard journals. Each monograph is self-contained, frequently summarizes existing theory or practice before presenting the author's original and previously unpublished work, and is likely to be one of a series of such research monographs in the same field."[1] However, it may be added that ordinarily a monograph is a short treatise. It differs from a treatise in the sense that it is a work done on a more limited scale. Otherwise both have the same features and serve same purposes. A research monograph presents results of original research.

EXAMPLES: *Creativity and the prepared mind*, by Ray Hyman (National Art Education Association, research monographs, 1), Washington, D.C., National Art Education Association.

Children of very low birth weight, by Alison MacDonald, (Research monograph, vol. 1), Philadelphia, Lippincot, 1967.

13 Research Reports

Research reports are reports regarding research and development projects. These are primitive form of literature because these are produced earlier in a research programme. Often these take the form of progress reports which serve temporary reference. Due to

[1]George S. Bonn, "Literature of science and technology", *McGraw-Hill encyclopedia of science and technology*, New York, McGraw-Hill, 1971, Vol. 7, p. 612.

the inadequacies of the periodicals, research reports issued as separate documents offer a successful alternative. These form vital part of primary sources especially in the areas of aeronautics and applied atomic energy. This kind of literature is often called 'unpublished' or 'semi-published' literature because normally these are not available through regular book trade channels but are made available to interested parties under certain kind of control.

EXAMPLES: *Scientific and technical aerospace reports,* National Aeronautics and Space Administration (NASA).

Government Reports, announcements & index (GRA&I).

14 Patents

A patent is a government grant of exclusive privilege which allows making use or selling of a new invention for a term of years. A patent takes the form of an official document, having the seal of government attached to it, which confers an exclusive privilege or right over a period of time to the proceeds of an invention.

Patents are regarded as a part of the primary sources because an invention has to be new, only then it can be patented. Very often, there may be no published description of the idea incorporated in a patent or its application. It may be mentioned that patents are of special interest to chemists and engineers. In each country, there is one publishing agency and these are serially numbered. In India, Indian Patent Office is responsible for granting patents. At present over 3000 patents are granted every year. The patents are listed in official patent office bibliographical tools. Besides, regular indexing and abstracting services also cover patents.

EXAMPLES: *Chemical abstracts,* 1907-, Easton, Pa., American Chemical Society, 1907-, Vol. 1-, Weekly.

Indian science abstracts, Delhi, Indian National Scientific Documentation Centre, Vol. 1-, 1965-, Monthly.

Physics abstracts: Science abstracts series A, London, Institution of Electrical Engineers, 1898-, Fortnightly.

World patents index abstracts journal (19 different editions are published), 1975-, London, Derwent Publications, Weekly (It is exclusively devoted to patents).

World patents index gazette section ch: Chemical, 1975-, London, Derwent Publications, Weekly (There are three such other indexes).

15 Standards

Standards form primary source of information. The importance of standards can be gauged from the fact that progress of modern society would be difficult without standards. These lead to simplification of production and distribution of products produced by a manufacturer. These ensure reliability for the consumers. As a result of standardisation, those items which do not follow prescribed standards get eliminated from the market.

A typical standard is a pamphlet covering definitions, methods, properties, measurements, etc. It may be illustrated with tables and diagrams. In India, Indian standards Institution is a major organization issuing standards. It brings out about 300 standards annually.

EXAMPLES: International Standards Organization, *Guidelines for the establishment and development of monolingual thesauri for information retrieval*, First draft proposal (ISO/TC46/TG (Paris 1971-1) 1034E. revised 3rd August, 1971).

British Standards Institution, *Microfiche*, BS 4187: 1976.

16 Trade Literature

Trade literature is an important source for getting information about particular products and their development. Often, it may be the only source for such information. As such, when the required information is not available elsewhere, then particular trade literature may become a primary source:

Trade literature aims to describe and also illustrate equipment or goods or processes or services relating to manufacturers. The basic objective of such a literature is to sell products produced by a manufacturer or to advance the prestige. It is issued by manufacturers or dealers and is often very well produced. It is issued in a variety of forms. It may take the form of a technical bulletin, price lists, data sheets, etc. Trade literature lies usually outside the scope of usual trade channels. The booksellers are disinterested to handle this kind of literature.

17 Dissertations

Universities normally require a candidate working towards a doctorate degree to write a dissertation (sometimes called thesis) under the supervision of a guide. These are usually expected to show evidence of original research, and are supposed to form an important category of documents for researchers in the concerned field. These should be considered primary sources of information. Much of what is worth-

while in dissertations is later published in the primary periodicals or books but frequently certain data relating to an important original work may never get included in traditional forms of literature.

18 Unpublished Sources

There are certain primary sources of information, which remain unpublished. Very often, these may be consulted for historical interest. In some of the subjects in social sciences, their percentage is as high as 40 per cent of the total literature.

EXAMPLES: (i) Laboratory notebooks
  (ii) Memoranda
  (iii) Diaries (A diary is a personal record of what interested the diarist, usually it is kept from day-to-day)
  (iv) Letters to or from a particular individual
  (v) Company files
  (vi) Internal research reports
  (vii) State papers
  (viii) Inscriptions on tombstones
  (ix) Portraits
  (x) Oral history (Oral history memoirs are records of interview. It consists of a systematic attempt to obtain from the lips of living persons, who led significant lives, a fullest record of their contribution to the political, economic and cultural life of their nation. It can be both detailed and as intimate as any private correspondence and often more reflective in nature. The interviewer and the subject can also verify the transcript).
  (xi) Coins, etc.

Note. Some of the items mentioned above can be covered under the term archives. The term "designates the organized body of records produced or received by a public, semipublic, institutional, business or private entity in the transaction of its affairs and preserved by it, its successors or authorized repository through extension of its original meaning as the repository for such materials."[1]

2 SECONDARY SOURCES

Secondary sources of information are those which are either compiled from or refer to primary sources of information. These contain in-

[1]*Encyclopaedia Britannica,* Chicago, Encyclopaedia Britannica, 1971, vol. 2, p. 326.

formation regarding primary or original information. The original
information having been usually modified, selected or reorganized so
as to serve a definite purpose or group of users. Such sources contain
information arranged and organized on the basis of some definite
plan. These contain organized repackaged knowledge rather than
new knowledge. Information given in primary sources is made avail-
able in a more convenient form Due to their very nature, secondary
sources are more easily and widely available than primary sources.
These not only provide digested information but also serve as
bibliographical key to primary sources of information. The primary
sources are the first to appear, these are followed by secondary
sources. It is difficult to find information from primary sources
directly. Therefore, one should consult the secondary sources in the
first instance, which will lead one to specific primary sources.

21 Periodicals

All periodicals do not report original work. There are a number of
periodicals which specialise in interpreting and providing opinions on
developments reported in primary sources of information. Such
periodicals may be considered secondary sources.

EXAMPLES: *New scientist*, edited by Bernard Dixon, London, IPC
Magazines, 1956-, Weekly.

   New society, London, New Science Publications, 1962-, Weekly.

22 Indexes

An index to a work contains an alphabetical list of names, topics,
places, formulae, titles of any significant item referring to material
presented in the main part of the work. Sometimes, these items may
be arranged chronologically, geographically or in some other way. A
well compiled index adds to usefulness of a work.

EXAMPLES: *Index to the Times of India*, Bombay, 1973-, Bombay,
Microfilm and Index Service, Reference Department, Times of
India, 1974-, Three times a year.

   Index given to the present book entitled *Reference service* is
another example of an index to a work.

23 Bibliographies

A bibliography is an organized list of primary or other sources rela-
ting to a given subject(s) or person. It is usually arranged alphabeti-
cally by author or chronologically or topic-wise. It may be compre-

hensive or selective. Sometimes, it may be provided with annotations. It may be published as a part of a larger work or as a separate work. The basic aim of a bibliography is to assist the user in locating the existence of or identifying a book or any other material which may be of interest to him. A well prepared bibliography provides a definitive coverage of documents over a period of time within specified limits. Thus, it also serves the purpose of retrospective searching of literature.

EXAMPLES: Dudley David Griffith, *Bibliography of Chaucer*, 1908-53, Scattle, University of Washington Press, 1955.

ASLIB book list: A monthly list of recommended scientific and technical books with annotations, London, ASLIB, Vol. 1-, 1935-, Monthly.

24 Indexing Periodicals

An indexing periodical is a regularly issued compilation of titles of articles that appear in current primary source journals. Generally, titles of new books, pamphlets, etc., are also included.

EXAMPLES: *Applied science and technology index*, New York, Wilson, 1913-, Monthly, except July.

Indian science index, 1975-, New Delhi, Indian Documentation Service, 1976-, Annual.

Readers' guide to periodical literature, 1900-, New York, Wilson, 1905-, Vol. 1-, published semi-monthly from September to June and monthly in July and August.

25 Abstracting Periodicals

Abstracts appear in different formats. The best known format for abstracting services is periodical. An abstracting periodical "is a regularly issued compilation of concise summaries of (*i*) significant articles (often in a very limited subject field) that appear in current primary source journals, and (*ii*) of important new research monographs, reports, patents, and other primary source publications in that field."[3]

An abstracting periodical serves as an index, a tool for retrieval of information on a specific subject and provides survey of current state of the art about the specific subject. However, indexing periodicals are earlier to appear than abstracting periodicals.

[3]George S. Bonn, *op. cit.*, p. 614.

EXAMPLES: *Biological abstracts*, Philadelphia, Biosciences Information Service of Biological Abstracts, 1926-, Semimonthly.

Chemical abstracts, 1907-, Easton, Pa., American Chemical Society, 1907-, Vol. 1-, Weekly.

Indian science abstracts, Delhi, Indian National Scientific Documentation Centre, Vol. 1-, 1965-, Monthly.

26 Reviews (*Survey type*)

A review is a survey of the primary literature. It aims to digest and correlate the literature over a given period. It also indicates the developments and trends in the field concerned. It may appear as a collection of papers on regular basis (annual or quarterly or monthly) or in the form of an article in a periodical. A review provides background information to a new problem in a suitable form and serves as a key to literature. List of references given in a review can serve as a first rate bibliography of the concerned subject for a period covered by it.

EXAMPLES: *Advances in nuclear science and technology*, 1962-, New York, Academic Press, Irregular.

Annual review of biochemistry, 1932-, Palo Alto, Annual Reviews, Annual.

Annual review of information science and technology, 1966-, Vol. 1-, Washington, D.C., American Society for Information, Annual.

27 Treatises

A treatise is a comprehensive compilation or summary of information on a subject. A treatise on a subject provides enough information to a person to acquire basic knowledge, so essential for carrying out advanced research. It also provides facts, along with discussion. The facts may include physical constants, methods of preparation and purification of compounds, etc. Usually, it is limited to a broad field (e.g., Organic Chemistry, Heat, Light, etc.), Due to the very nature, these become out of date within a short period of time.

EXAMPLES: *Treatise on the calculus of finite differences*, 4th ed., New York, Chelsea, 1960.

Treatise on inorganic chemistry, by H. Remy, edited by J. Kleinberg, New York, American Elsevier, 1956, 2 vols.

28 Monographs

A monograph is a short treatise on a specific subject. A monograph

and a treatise serve the same purposes with the difference that a monograph is an attempt on a limited scale. Very often, a monograph may be brought out as a part of a series.

EXAMPLES: *Study in the history of ideas*, by E. Baldwin Smith (Monographs in arts & archaeology series, 25), Princeton, N.J., Princeton University Press, 1971.

Moving frontiers in invertebrate virology, by T. W. Tinsley and K. A. Harrap, edited by J. L. Melnick (Monographs in virology, Vol. 6), White Plains, N. Y., Phiebig, 1972.

291 Textbooks

A textbook is a book of instruction. Its primary aim is not to impart information about a specific subject but to enable one to develop proper understanding of the subject. Presentation is extremely important and it is prepared to serve a particular level of readership. It cannot be comprehensive. Often presentation is colourful and attractive, giving plenty of illustrations and diagrams. A good textbook takes into consideration the method of teaching and level of readership. It is revised keeping in view new developments and changing methodology of teaching. There is a difference of opinion about the place of textbooks as tertiary sources.

EXAMPLES: *Textbook of crop production*, by P. C. Raheja, etc., Bombay, Asia, 1973.

Textbook of cytology, by Walter V. Brown and Eldridge M., 2nd ed. Bertke, St. Louis, Mosby, 1974.

Theory of cataloguing, by Girja Kumar and Krishan Kumar 2nd ed., Delhi, Vikas, 1977.

292 Reference Books

Reference works, which contain the desired information itself are considered secondary sources of information. These include encyclopaedias, dictionaries, handbooks, tables, formularies etc. These form an important part of secondary sources of information. These are sources of ready reference. These are compiled so that everyday information can be provided readily.

2921 ENCYCLOPAEDIAS

An encyclopaedia is a book giving information on all branches of knowledge or a specific subject. It is an ideal book, which deals with concepts. An encyclopaedia is a storehouse of knowledge

giving all information of significance. However, it is best used for finding answers to background questions related to general information and self-education. One often turns to encyclopaedias for one's everyday information requirements. This is also true of scientists and technologists.

EXAMPLES: *Encyclopedia Americana*, New York, Grolier, 1976, 30 vols.

International encyclopedia of the social sciences, New York, Collier and Macmillan, 1968, 17 vols.

McGraw-Hill encyclopedia of science and technology, 4th ed. New York, McGraw-Hill, 1977, 15 vols.

2922 DICTIONARIES

A dictionary is a book, which deals with words of a language or of some special subjects, author, etc. Thus a dictionary is a word book. Although a dictionary is supposed to deal with words but often it may go beyond this.

EXAMPLES: *Encyclopaedic dictionary of Sanskrit on historical principles*, Poona, Deccan College Postgraduate and Research Institute, 1976-, vol. 1-.

Random House dictionary of the English language, edited by Jess Stein, unabridged edition, New York, Random House, 1966.

Webster's third new international dictionary of the English language, unabridged with seven language dictionary, Springfield, Mass., Merriam, 1961.

2923 HANDBOOKS

A handbook is a compilation of miscellaneous information in a compact and handy form. It contains data, procedures, principles, etc. Tables, graphs, diagrams and illustrations are provided. Scientists and technologists use handbooks in their fields rather frequently.

EXAMPLES: *Britain, 1948/49-, an official handbook*, London, Stationery Office, 1948-, Annual.

Handbook of chemistry and physics: a ready reference book of chemistry and physical data, 52nd ed., Cleveland, Ohio, Chemical Rubber, 1971.

Machinery's handbook: a reference book for the mechanical engineer, draftsman, toolmaker and machinist, by E. Oberg and F. D. Jones, 19th ed., New York, Industrial Press, 1971.

2924 MANUALS

In common practice, a manual is an instruction book, which instructs how to do something by means of specific and clear directions.

EXAMPLES: *Manual for the handling of applications for patents, designs and trademarks throughout the world*, Amsterdam. Looseleaf.

Manual for writers of term papers, theses, and dissertations, rev. ed., Chicago, University of Chicago Press, 1955.

Professional investor's manual, by R.S. Greenly, London, Greenly, 1974.

2925 TABLES

Many of the handbooks contain data in the form of tables. Some of the handbooks devote substantial portion of the work to tables as compared with text. Tables are a convenient form to present data (e.g., density, melting points, atomic weights, boiling points, reactions, etc). These are extremely useful in science especially physical sciences and technology.

EXAMPLES: *International critical tables,. . .* New York, McGraw-Hill, 1926-33, 7 vols and index.

Tables of constants and numerical data, Oxford, Pergamon Press, 1947-, vol 1-.

293 Translations

Translations are an important part of secondary sources. Their characteristics are the same as those of primary or secondary or tertiary sources from which these are translated. Many of the authors of research papers prefer to cite original sources rather than translations.

3 TERTIARY SOURCES

Tertiary sources of information contain information distilled and collected from primary and secondary sources. The primary function of tertiary sources of information is to aid the searcher of information in the use of primary and secondary sources of information. Most of these sources do not contain subject knowledge. Due to increase in literature, tertiary sources are becoming increasingly important. Out of various kinds of sources, tertiary sources are the last to appear.

31 Bibliography of Bibliographies

A bibliography of bibliographies lists bibliographies which direct readers to useful bibliographies through subject, name of an individual, place, institution, etc. The bibliographies referred to may be in the form of a separately published book or part of the book or part of a periodical article or some other type of document. As the number of bibliographies published every year is large, therefore, bibliographies of bibliographies are highly selective in nature.

EXAMPLES: *Bibliographic index, cumulative bibliography of bibliographies*, 1937-, New York, Wilson, 1938-.

Index bibliographicus, 4th edition, The Hague, Federation Internationale de Documentation, 1959 to date.

A world bibliography of bibliographies and of bibliographical catalogues, calendars, abstracts, digests, indexes and the like, by Theodore Besterman, 4th ed., Geneva, Societas Bibliographica, 1965-67, 5 vols.

32 Directories

A directory is a list of names and addresses of persons, organizations, manufacturers, or periodicals. It may list information in a way which best serves the requirements of its users so as to enable them to get the required information readily. The word 'directory' may or may not appear in the title. The range of subjects dealt by directories is tremendous.

EXAMPLES: *World directory of mathematicians*, 4th ed., Stockholm, Almqvist & Wiksell, 1970.

World guide to technical information and documentation services, Unesco, 1975.

World of learning, 1947-, London, Europa, 1947-, Annual.

Ulrich's international periodicals directory; a classified guide to current periodicals, foreign and domestic, 15th ed., 1973-74, New York, Bowker, 1974.

33 Guide to Literature

A guide to literature assists a user to use literature of a specific subject. It helps to evaluate and introduce literature. It lays emphasis on literature rather than the content of a specific subject. It mainly covers secondary and tertiary sources.

EXAMPLES: *Reader's guide to the social sciences*, edited by Bert F.

Hoselitz, revised edition, New York, Free Press, 1970.

Guide to historical literature, by American Historical Association, New York, Macmillan, 1961.

Use of biological literature, edited by R. T. Bottle and H. V. Wyatt, 2nd ed., London, Butterworths, 1971.

4 NON-DOCUMENTARY SOURCES

Non-documentary sources of information form a substantial part of communication especially in science and technology. Users' studies have underlined importance of such sources. These sources provide information which other sources do not. There are two kinds of sources (formal and informal). Formal sources include research organizations, societies, industries, government departments, universities, consultants, etc. Informal sources include conversation with colleagues, visitors, attendance at professional meetings, etc. Very often, the conversation or discussion would point out primary or secondary sources (documentary sources). Informal sources are live sources, which are extremely important in the process of communication. Very often, if a scientist working on an experiment needs some data, he would turn to his colleague working in the same laboratory rather than consult a printed page. Informal sources tend to be more convenient sources because it is certainly easier to have a dialogue with an expert than use a bibliography or index or card catalogue or even consultation of a reference librarian. The documents essentially are monologues but a dialogue with a human being can assist in clarifying ones requirement for information.

5 CONCLUSION

The above categorization of sources of information is based on the characteristics of the documents. Categorization of documentary sources of information is useful. It takes into consideration relative currency and accuracy of sources of information. Primary sources are more current than secondary and tertiary. Primary sources are generally more accurate than secondary sources due to the fact that these represent original ideas. However, in some cases a secondary or tertiary source may correct errors, which might have occurred in a primary source.

In searching for information, a researcher usually starts with secondary sources and tertiary sources and ends the search with primary sources. Secondary and tertiary sources contain infor-

mation in organized form and these serve as guides or indicators to detailed contents of primary literature. With increasing amount of literature being produced, it is becoming almost impossible to use primary sources directly for searching of information. A scholar would also not be able to keep himself up-to-date and well informed in his field of specialization without the aid of secondary and tertiary sources. This goes to show the importance of these sources of information.

FURTHER READING

GEORGE S. BONN, "Literature of science and technology," *McGraw-Hill, encyclopedia of science and technology*, New York, McGraw-Hill, 1971, Vol. 7, pp. 611-617.

OTTO FRANK, ed., *Modern documentation and information practices*, The Hague, FID, 1961 pp. 23-30.

DENIS GROGAN, *Science and technology; an introduction to the literature*, 3rd ed., London, Bingley, 1976.

MARGARET HUTCHINS, *Introduction to reference work*, Chicago, American Library Association, 1974, Ch. 10-15.

L. T. MORTON, ed., *Use of medical literature*, London, Butterworths, 1974, Ch. 2.

C. C. PARKER and R. V. TURLEY, *Information sources in science and technology*, London, Butterworths, 1975, pp. 4-154.

9 KINDS OF REFERENCE BOOKS AND THEIR EVALUATION

1 REFERENCE BOOK

11 Definition

IT is rather difficult to define as to what a reference book is? However, we may make an attempt to understand the use of the term from practical point of view.

From the point of use, we may divide books into two categories as below:

(*i*) Books which are written so that these can be read consecutively for inspiration, enjoyment or information; (*ii*) Books which are designed to be consulted or referred to from time to time for a specific piece of information. Ordinarily, these do not lend themselves to continuous reading. Broadly speaking, any book can be called a reference book, provided the information contained in it is so organized that it becomes readily accessible.

The first category consists of ordinary books and the books of second category are called reference books.

12 Characteristics

An ordinary book possesses the following characteristics:

(*i*) It is made of continuous exposition. It is developed sentence by sentence, paragraph by paragraph, chapter by chapter. There is a link at each stage. There is an element of continuity. In case of a biography of a person, it would normally be developed from child-hood to death and later influence. In a novel, the novel develops through stages, there is an element of continuity. Ordinary books can be read continuously from cover to cover. Ordinarily, these are allowed to be lent out by libraries.

A reference book is designed by its arrangement and treatment to serve certain purposes. A reference book usually possesses the following characteristics:

(*i*) It is meant for consultation for a specific piece of information. Of course, works like dictionaries, encyclopaedias, yearbooks, etc., provide information directly but works like bibliographies, indexing

and abstracting services do not provide information itself but point out the sources which may contain information.

(*ii*) It is not meant for continuous reading. No one is expected to read a dictionary or an encyclopaedia or a directory from cover to cover.

(*iii*) Very often, a reference book may consist of disjointed entries of varying length. For example, one entry in an encyclopaedia may have no relationship with the next entry. These entries may have been brought together merely due to the incident of alphabetization. In other words, we can say that a reference book usually lacks continuous exposition.

(*iv*) It is usually not lent out because reference books are required from time to time for consultation. One never knows, somebody may require it at anytime. Thus, its use is restricted to the library building itself.

(*v*) Information in a reference book is so organized that the required information can be located promptly and exhaustively.

Reference books form the very basis of reference service. Of course, the reference staff has also to consult other materials at times to give service. Due to the nature of their use, these are usually kept in a separate sequence in a library.

It may be added that the border line between reference books and others is not always sharp. The decision as to whether or not to regard a given book as a reference book will sometimes differ from library to library. However, works like *Encyclopaedia Britannica*, *World of learning*, *Europa yearbook*, etc., are always regarded as reference books. There is no difference of opinion on this.

2 KINDS OF REFERENCE BOOKS

We may recognize the following kinds of reference books:
Dictionaries,
Encyclopaedias,
Biographical sources,
Yearbooks, almanacs and supplements to encyclopaedias,
Geographical sources: Gazetteers, guide books, atlases, maps and globes,
Directories,
Current sources: hand books, manuals and sources of statistics,
Bibliographies and
Audio-visual sources.

The kinds of reference books enumerated above have been dealt

with in detail in the later part of the book. It may be mentioned here that some of the above types overlap. For instance, a supplement to an encyclopaedia can be considered as a part of encyclopaedias or separately. Similarly the sources of statistics can be considered under yearbooks or as a separate category.

3 CLASS AND TYPES OF REFERENCE QUESTIONS

A reference librarian receives a variety of reference questions. It is rather difficult to define a reference question because there is differences of opinion. A request from a user for a piece of information or a document(s) may be termed a reference question. It is helpful to classify these questions. One kind of classification based on kinds of reference books, along with related types of questions is given below:

Class of questions about	Types of questions concerning
Language	Definition, spelling, pronunciation, abbreviations, usage of terms, foreign terms, synonyms, antonyms, homonyms, signs, symbols, slang, dialect
Background	General information, self education, all about something, something about, something on
People	Leading personalities, specialists, professionals, authors, less-known persons
Trend	Current events, significant developments of the past year, trends in a particular field of activity or study
Places	Location, description, distances, identification
Organizations including societies, institutions	Addresses, aims, membership, publications, history, structure, names of chief officers
Facts and activities	Events, statistics, formulas, curiosities about traditions, customs, superstitions, etc. Allusions, identification of plots and characters, quotations, record of activities, how to do or how to make or how to conduct or how to perform
Lists of documents	Best books, documents on a subject, literature published in a country, reviews, location of a document, bibliographical details of a document
Illustrations	Diagrams, pictures, photographs, cartoons, slides, films, recordings

The above table is based on the one given by Shores[1] in his *Basic reference sources.*

4 EVALUATION OF REFERENCE BOOKS

In order to achieve a thorough understanding of reference books, it becomes essential to evaluate these. A reference librarian should know how good/bad/indifferent a given reference book is. From his point of view, a reference book is an excellent one, if it is able to provide specific and accurate answers to queries without much difficulty. It would prove to be a poor reference book, if it is not able to provide direct and specific answers to questions or answers are not always authoritative or the answers are difficult to locate.

Reference books are different in their purpose from ordinary books, therefore, a different approach is required for their study and evaluation. It is convenient to lay down check points for their appraisal. The checklist for the evaluation of reference books should consist of authority, scope, treatment, arrangement, special features and drawbacks, format and conclusion.

Authority. The authoritativeness of a reference book can usually be judged on the basis of qualifications, experience and reputation of the sponsoring body (if any), publisher, distributor, author(s), editor(s), compiler(s).

Scope. The scope of a reference book can be understood properly by finding out answers to the following questions:

What is the purpose of the work as stated by the editor himself?

Has this purpose been fulfilled in the main work?

Does it follow a definite plan consistently? What is the extent of supervision provided by the editor(s)?

What are the limitations with regard to subject, class of readers, up-to-dateness of materials? What is the overall coverage?

.Treatment. How thorough, reliable and complete is the information (e.g. facts, statistics, place-names, names of persons, names of organizations, bibliographical details. etc., whichever is applicable?

Does it show any bias on controversial topics? Has the space allocated for a topic related to the degree of importance attached to a topic?

Has the work been written for scholars or laymen, adults or children? How readable is the writing?

[1]Louis Shores, *Basic reference sources,* Chicago, American Library Association, 1954, p. 9.

Arrangement. Arrangement is of great importance. It is essential that one should be able to locate information easily and quickly. Good arrangement adds to the value of a reference book. The arrangement of the main text can be classified or chronological or geographic or alphabetical or some other. The kind of arrangement used should have a sound basis. Index to the main text is extremely important. The index should be detailed one providing reasonable number of approaches complemented by cross references. The index can be alphabetical or classified or some other.

Special features and drawbacks. The answers to the following questions will bring out the concerned informations:

What distinguishes it from other reference books of similar type?

Does it include supplementary lists or appendices?

Are the bibliographies up-to-date and useful?

What are the devices used to keep it up-to-date?

Format. Format refers to binding, quality of paper, typefaces, page make up, illustrations, plates, diagrams, maps, etc.

Do binding, quality of paper, typefaces and layout satisfy the minimum specifications? (Binding is of special consideration for bulky works likely to be used heavily.)

Are the illustrations, plates, diagrams, maps etc., of good quality and well produced? Are these directly related to the main text?

Conclusion. Conclusion should include overall judgement about the reference books.

It should also include answers to the following questions:

Should it be recommended for a library or not? If so indicate the kind of library which will benefit most.

Note. Some works have a long history. It would be useful to add *history* as an additional check point. In case of a revised work, one should try to find out the extent of revision. One should try to determine whether or not the revised edition is a new work.

5 SOURCES OF INFORMATION FOR THE EVALUATION OF A REFERENCE BOOK

There are varieties of sources of information which a reference librarian can use to evaluate a reference book. The reference book to be evaluated is considered the most important source of information. Different editions of the same work, other works of the similar type and evaluation of the same work done by others can be useful for the purpose.

A reference librarian must be able to read a reference book techni-

cally. For this, he should acquire book sense. He should be able to determine the essentials without waste of time and effort. A reference librarian must also be able to get the essence of a reference book by scanning the preface or introduction or summary chapter, contents, parts of the main text and index. The basic thing expected from a reference librarian is that he should know what the various parts of a reference book are and also understand which information is to be found in each part.

Title page of a reference book usually contains full title, along with subtitle (may indicate the scope), author's name including qualifications, names of collaborators, publisher, place and date of publication, etc. In case of a periodical publication, additional information about frequency, sponsoring body, etc., may also be found. *Back of the title page* usually contains information about edition, year of publication, year of copyright, etc. A *half title page* may contain part of the information usually given on the title page and/or some of the statement regarding authors, collaborators, edition, series, etc.

Preface contains explanation by the author as to why he wrote the book. Sometimes, it may contain author's plan, explanation as to how the work was developed, and acknowledgements to those who might have assisted the author in the writing of the document. Preface can be highly useful because it can be helpful in knowing the scope, objectives, special features claimed, limitations, arrangement of entries or information, kinds of entries, index, category of users for whom it is meant, revision policy and any other significance of the work. It precedes the table of contents. Similar remarks are applicable, in case the work has been compiled/and edited.

Table of contents lists the contents of the document, often giving chapter headings, with or without explanation. It usually follows the title page. In case there is a preface, then it follows the same. It is extremely useful in determining the scope, arrangement, and limitations of the work. Very often, it will indicate whether or not certain claims made in the preface can be taken at the face value.

Introduction is a preliminary note which gives more elaborate treatment to the subject than the preface. Sometimes it is contributed by a person other than the author. It follows the table of contents. It forms an important source for determining the scope of the work, aim, special features claimed, limitations of the work, arrangement of information or entries, kinds of entries or information, index, category of users for whom it is meant, revision policy, etc.

In case the work gives both preface and introduction, then both may supplement each other. Very often only one of these may be

provided by the work.

Text contains the work proper and forms the most substantial portion of the document. This may be examined to determine the following:

. Scope of the work.

Kinds and quality of articles (Are the articles popular or scholarly or scientific in nature? By studying articles on controversial subjects, one can find out whether or not the articles are biased or impartial. One should study the articles on subjects about which one has special knowledge to determine the quality of articles with regard to up-to-dateness, accuracy and reliability. Are the articles signed? Are the articles provided with bibliographical references in a satisfactory manner?)

Kinds of entries and information contained in each entry.

Arrangement of entries and information.

Cross references (extent of cross references and whether given in the main work or separately).

Supplementary lists (determine the number and kinds of supplementary lists. Are these interrelated to the main work) and other special features of the work.

Whether or not the claims made in the preface and introduction are true. Has the work been able to serve the original aim?

Limitations of the work.

Index is a detailed alphabetical list of names of persons, corporate bodies, places and subjects, etc., dealt in the text, given along with references to exact pages of occurrence. A detailed and analytical index adds to the value of an index.

Different editions of the same work should be compared to determine whether the latest edition supersedes the previous edition or it is to be used as a complementary work. In other words, in case of a new edition, one should try to determine the extent of revision by comparison.

Other reference books of similar kind are useful for the purpose of comparison. Read articles on the same topics to determine clarity (read articles on unknown topics), readability, accuracy (read articles on known topics), up-to-dateness (compare statistics),etc. Compare the articles on the same topics with regard to length and kinds of bibliographies.

6 SOURCES FOR REVIEWS OF REFERENCE BOOKS

Some of the leading sources for reviews of current reference books

are described below:

American reference books annual, Littleton, Colorado, Libraries Unlimited, 1970—.

Describes in classified order reference books published ·in the United States during the previous year. The Annual 1976, includes those published during 1975. It also provides critical annotation for each title as well as citations to reviews appearing elsewhere. The reviews are thoughtful, critical and comparative but rather brief.

Booklist, Chicago, American Library Association, Vol. 1-, 1905-, twice monthly except once in August.

This is a bibliographical tool listing currently produced books, 16 mm films, 8 mm film loops, film strips, etc. Books and audio-visual aids are described in concise form summarizing the content. Long analytical reviews of encyclopaedias and other reference works and sets are given, indicating whether or not the items are recommended. The reviews are very well written. These reviews are reprinted in book form every two years as *Reference and subscription book reviews*.

Reference services review, Ann Arbor, Mich., Picrian Press, 1972-, quarterly.

This is a basic reviewing periodical. Each issue contains about 300 evaluated reviews of reference works. It consists of the following parts:

(*a*) Editorial material, containing one or two articles on a particular aspect of reference service.

(*b*) An annotated listing of recent reference works. The annotations are critical and prepared by Frances Neel Cheney.

(*c*) British reference books, by Anthoney Harvey. This includes works by British publishers as well as reference works in English but published outside United States.

(*d*) Government reference publications, by Jimmic Hoover.

(*e*) Reference books in print, describes titles, which may be reviewed later.

(*f*) Reference serials, which evaluates indexing and abstracting services, bibliographies, etc., covering only periodical publications.

(*g*) Reference book review index, notes reviews of reference titles in about 70 periodicals. The arrangement is by author supplemented by a title index.

It may be noted that total bibliographical information is provided for each item covered. No special·library or a large library can possibly do without it.

Other leading sources for reviews of reference books are *Choice*,

The library journal, Wilson Library Bulletin, RQ, New York Times, Saturday Review, Times Literary Supplement. The last three sources include reviews of reference books occasionally. The reviews appearing in *Booklist* are superior to those coming out elsewhere. It may be added that Indian periodicals on library and information science are more likely to review Indian reference books. Indian reference sources are hardly covered in non-Indian journals.

A few important sources for reviews of retrospective reference books are mentioned below:

Guide to reference books, compiled by Eugene P. Sheehy, 9th ed., Chicago, American Library Association, 1976.

Guide to reference materials, edited by A.J. Walford, 3rd ed., London, the Library Association, 1973-1977, 3 Vol.

Indiaana; a select list of reference and representative books on all aspects of Indian life and culture, by B. Sengupta, Calcutta, World Press, 1966.

Sheehy (eighth edition was compiled by Constance Winchelly) and Walford are two important names. Both cover reference books in all major fields, giving an evaluative annotation for each. They are selective, listing only the best unless there is nothing good enough in a particular area. Sheehy lays more stress on works produced in the United States, Canada and Latin America. Walford, on the other hand, places more emphasis on the British titles as well as on works published in Europe. Both are great works but are not up-to-date. *Indiaana* is a useful selective list, giving full bibliographical details as well as short annotations.

Even books on reference service, such as *Introduction to reference work,* by W.A. Katz (New York, McGraw-Hill, 1978, 2 Volumes) and *Fundamental reference sources,* by F.N. Cheney (Chicago, American Library Association, 1971) are very helpful.

The question arises, if excellent reviews of reference books are published in various sources, then why should a reference librarian be expected to evaluate these himself. Firstly, the reviews are usually late to appear. Secondly, evaluation of a reference book by a reference librarian or a student of library science gives him a good understanding of the work. By reading a review, one cannot learn to use reference sources profitably. In order to provide reference service effectively, one should be able to handle reference sources properly.

FURTHER READING

Frances Neel Cheney, *Fundamental reference sources,* Chicago, American Library Association, 1971, pp. 7-12.

Margaret Knox Goggin and Lillian M. Seaberg, "Publishing and reviewing of reference books," *Library Trends,* 12, 1964, pp. 437-55.

Louis Shores, *Basic reference sources,* Chicago, American Library Association, 1954, pp. 8-9, 18-19.

Harry E. Whitmore, "Reference book reviewing" *R. Q.* 9, 1970, pp. 221-26.

C. M. Winchell, *Guide to reference books,* 8th ed., Chicago, American Library Association, pp. xiv-xviii.

10 DICTIONARIES

1 SCOPE

VERY often, the first step in answering a query is to define the terms. For this purpose, a dictionary is considered an excellent source of information.

A dictionary contains the words of a language or the terms of a subject, profession or vocation arranged according to some definite order usually alphabetical one giving their meaning, pronunciation, spelling, syllabication, use, etc. Thus, a dictionary is concerned with the word. On the other hand, an encyclopaedia gives information regarding the thing represented by the word. Thus, the basic differ-ence between the two is that a dictionary defines words and an ency-clopaedia provides general information about topics. However, in border line cases, it may be difficult to draw a line between the two.

The use of the term "dictionary" in a title is sometimes misused. The work may be encyclopaedic in nature because it may give infor-mation about the thing as well as the words. Similarly, sometimes the term "encyclopaedia" in a title may be used for a work, which may be nothing but a subject dictionary.

Modern large dictionaries called unabridged dictionaries are ency-clopaedic in nature, providing information about the thing and the word. Thus combining features of two types of reference books, namely, a dictionary and an encyclopaedia.

2 PURPOSE

During 18th century, it was commonly agreed that a dictionary should attempt to standardize spelling, meaning, pronunciation and usage of words and may fix the words of good English once for all. But in the 20th century, it is considered that a dictionary should record exactly the development of a language. However, due to the growth of dictionaries, dictionaries have somehow led to standardiza-tion of languages.

Those dictionaries, which attempt to set authoritative standards for spelling, meaning, pronunciation and usage are called prescrip-

tive and the others aiming to merely record the words of a language, along with all kinds of spellings, meanings, pronunciation and uses are known as descriptive. Thus in descriptive dictionaries, these aim to represent the language as used at the time of compilation (Examples include *Oxford English dictionary and Webster's third new international dictionary*). Descriptive dictionaries are based on evidence carefully collected from an inventory of recorded sources of the language concerned. Prescriptive dictionaries are based on considered opinions and judgments of their compilers regarding as to what should be taken as standard or approved usage. Samuel Johnson's *Dictionary of the English language* (1755) is a good example of a prescriptive dictionary.

3 PREPARATION

The making of a dictionary is a big job carried out by lexicographers. This requires collection of a large amount of data about the language or language(s) in a careful manner. The data is then classified and sound conclusions are drawn. Next step consists of presentation of information in the form of definitions and other necessary explanations. The quality of a dictionary depends upon the experience, accuracy and capability of the editors involved in the work.

4 ALTERNATIVE NAMES

The following are the alternative names of dictionaries:

(*i*) Glossary (a list of terms along with some explanation in a special field);

(*ii*) Thesaurus (a treasury of words); and

(*iii*) Lexicon (a dictionary of some foreign languages).

5 TYPES

For our purpose, we may divide dictionaries into the following types:

(*a*) General dictionaries: Unbridged and desk dictionaries;

(*b*) Subject dictionaries;

(*c*) Supplementary language books or word books, which deal with words or aspects of words, namely quotations, synonyms, antonyms, usage, abbreviations, slang, dialect, rhyme, grammar, etc. These can also be called special purpose dictionaries. These supplement general language dictionaries. These have a wide range and variety. The words or aspects of words dealt with in these are also

covered in general dictionaries. However, special purpose dictionaries cover these far more comprehensively. It may be mentioned that very often books of quotations are treated independently as a separate category of reference books. But here it has been included as a special purpose dictionary.

6 USES

The following are the main uses of a dictionary:
　(*i*) To find the meanings of words, phrases and expression;
　(*ii*) To check the spelling, syllabication and hyphenation of a word; and
　(*iii*) To check the pronunciation of a word.
　The other uses, which are secondary in nature are:
　(*i*) To trace the history of a word including its origin, derivation, etc;
　(*ii*) To determine the usage of a word in terms of current, archaic, rare, slang, etc;
　(*iii*) To indicate the dialect, if any;
　(*iv*) To determine synonyms, antonyms and homonyms;
　(*v*) To determine abbreviations, acronyms, signs and symbols;
　(*vi*) To indicate major place names (rivers, mountains, cities, etc.);
　(*vii*) To indicate major personal names from history, mythology, and *the Bible*;
　(*viii*) To list foreign terms (a dictionary for English language may include terms like sine qua non, modus operandi, ad hoc, etc., which are foreign terms); and
　(*ix*) To provide quotations (some dictionaries contain illustrative quotations, which can often be used to find or identify a given quotation).

7 CONSIDERATIONS IN REFERENCE SERVICE

In the choice of a dictionary, one should keep in view that use of a word can differ from country to country; between subject to subject; between one group and another; from period to period etc. A dictionary to be used, if necessary, should take into consideration regional usage. In India, we follow British practices with regard to spellings, pronunciation and usage. Therefore, an English language dictionary to be used in India should follow British practices.

One should keep in view that dictionaries have a vast scope covering almost every aspect of a language.

Ordinarily, one should use standard desk dictionaries. In case, these are found insufficient, then one should consult unabridged dictionaries.

For the requirements of specialists, one should prefer to consult a subject dictionary.

In order to get the best out of a dictionary one should read its introduction and use it accordingly.

8 CHOICE FOR USE

One can choose an abridged or unabridged dictionary depending upon one's requirement.

For everyday use, an abridged dictionary often called, standard desk dictionary or collegiate dictionary, may be preferred. These may contain between 130,000 to 150,000 entries. In case, the information given in these is insufficient, then one should consult an unabridged dictionary. Generally a dictionary is considered an unabridged one, when it contains over 250,000 entries. However, there is no hard and fast rule in this regard.

In the field of unabridged dictionaries, there are three major publishers:

Funk and Wagnalls (Reader's Digest Books, Inc).

G and C Merriam Company (Encyclopaedia Britannica, Inc).

Random House, Inc.

The three most used unabridged dictionaries are listed below:

Funk and Wagnalls new standard dictionary of the English language, New York, Funk and Wagnalls, 1964.

Random House dictionary of the English language, edited by Jess Stein, Unabridged edition, New York, Random House, 1966.

Webster's third new international dictionary of the English language, Springfield, Mass., Merriam Webster, 1971.

In case, one wants to trace the history of a word in English language, then there is nothing better than *The compact edition* of the *Oxford English dictionary* (New York, Oxford University Press, 1971), 2 vols.

In case the query is related to a specialized aspect, then a specialized dictionary dealing with that aspect would serve the purpose. A few examples are given below:

Roget's international thesaurus, 4th ed., New York, Crowell, 1977.

Webster's new dictionary of synonyms, Springfield, Massachusetts, G & C Merriam, 1968.

Familiar quotations, compiled by John Bartlett, 14th ed., Boston,

Little, Brown, 1968.

Home book of quotations, compiled by Burton E. Stevenson, 10th ed., New York, Dodd, Mead, 1967.

91 CHECKLIST FOR EVALUATION

In order to make the best use of dictionaries, it is essential to acquire a thorough understanding of these. This can be done to a large extent by evaluating these on the basis of a laid down criteria. The checklist for the purpose of its study should consist of history, authority, scope, arrangement, word treatment, special features, revision, format and conclusion.

911 History

The history of a dictionary would indicate, how it has undergone changes over a period of time. This will bring out variations between different editions. This will enable one to decide whether earlier editions can be useful or not for reference service. There is much variation between second and third edition of *Webster's third new international dictionary of the English language*, to the extent that it is considered advisable to have both editions in a library. Both these editions are found useful for reference service.

912 Authority

The work should be authoritative. In other words, it should be accurate and dependable. The authoritativeness of a dictionary can be usually §judged on the basis of the reputation of the publisher, editor(s) and special contributors.

The authority can be determined properly by finding the answers to following questions:

Is the publisher well known for its works, particularly in the field of lexicography or related fields?

What are the qualifications, experience and professional competence of the editor, editorial staff and special contributors? Is the authority of these persons acceptable? (In case of an authoritative work, the editor should be a linguist or a philologist. He should be assisted by specialists in etymology, spelling, pronunciation and various subject fields).

913 Scope

What is the purpose of the work as stated by the editor himself?

What are the limitations of the vocabulary with regard to subject,

language, time (is it limited to vocabulary in current usage)?

Is it selective or comprehensive?

How many entries are covered (vocabulary size indicates scope of the dictionary). Counting may cover main words only or as well include all derived and compound forms. An unabridged dictionary may include obsolete, little used and common words. But an abridged one may exclude obsolete and little used ones).

What is the basis of selection of words?

Does it include slang, dialect, obsolete forms, technical terms?

914 Arrangement

Is the vocabulary arranged letter-by-letter ?or word-by-word in alphabetical sequence?

915 Word Treatment

Word treatment includes spelling, pronunciation, syllabication, etymology, definition, quotation, synonym and antonym, part of speech.

Spellings may be British or American. These may be conservative or simplified.

Pronunciation varies from region to region, it may be indicated by means of diacritical marks or phonetic alphabet.

Syllabication can be indicated by means of spaces between parts of words or by hyphens or by centred periods. Stress can be shown by means of an underline, double hyphen or accent marks.

Etymology and history of words should be provided in detail to show changes in meaning and usage. The details may be supported by dates.

Definitions should be accurate, clear and precise. These should be provided keeping in view the level of the users. These may be given in historical sequence (older first) or with current meaning given first.

Quotations are extremely useful. These should be authoritative and numerous.

Synonyms and antonyms are included in most of the dictionaries. Some include these under the word entry, others put these separately.

Part of speech should be indicated clearly. Usually, it is indicated by an abbreviation.

916 Special Features

Some of the dictionaries include lot of encyclopaedic material, such as:

` Lists of personal names, sometimes even short biographical sketches of notables may be given;

Lists of place names, sometimes even description from geographical and historical point of view may be added;

Lists of colleges and universities;

Maps;

Table of weights and measures;

Coloured plates of flags, birds, vegetables, flowers, etc;

Black and white illustrations with words and other items;

Statistical table including census data.

The following are the special features, which are usually to be found in dictionaries:

List of abbreviations;

List of signs, symbols;

Comparative tables of pronunciation;

Terms in special subject fields like business;

Rhymes;

Foreign terms used in English writing;

List of new terms;

Questions as to whether the work is new, the only one of its kind, or unique may be raised. What, for instance, is its distinctiveness? This can be determined by comparing it with other dictionaries;

How reliable is the work? For this a few words may be checked.

917 Revision

New words are born fast, therefore, in case, a dictionary is to be kept up-to-date, it must be revised periodically. The application of computers can make it possible to bring out a fully revised edition promptly at a comparatively cheaper cost than traditional methods of printing. The other alternative might be to periodically issue a new word supplement.

918 Format

Is the work in a single volume or a multivolume one? Is it physically convenient to use?

Will the binding withstand heavy use?

Are the typefaces clear and legible?

Are the headings clear, simple and easy enough to follow?

Are the illustrations of good quality?

Is the page inviting in appearance and convenient for reference?

Is the quality and weight of paper suitable?

9191 *Conclusion*

Conclusion should provide overall judgment about the concerned dictionary. Is the work to be recommended for a library or not? If so, specify the kind of library (small, large, medium, special, public, academic).

92 GENERAL (Unabridged) DICTIONARIES

921 *English*

Funk & Wagnalls new standard dictionary of the English language, New York, Funk & Wagnalls, 1964.

The first edition appeared in 1893 under the title *Standard dictionary*. The *New standard* was first published in 1913, which was a complete revision of 1893 edition. A complete revision of work has not been attempted since 1913 but it has been kept reasonably up-to-date by including new words in the text, pruning or deletion of definitions of older words and by adding supplements in the new printings.

There are over 450,000 entries, out of which over 65,000 are proper names. The proper nouns include biographical, geographical, mythological, biblical entities, etc. All the entries are given in one alphabet covering ordinary dictionary words and also the various proper names mentioned above.

Information about each word includes the following (where applicable):

Spelling (preference for simple form), capitalization, syllabication (centred period), and hyphenation; pronunciation (pronunciation key is easy to use and understand); part of speech; inflections when irregular; usage of labels for colloquial, rare words, etc.; definitions (current and most common meanings given first); phrases and quotations to serve as illustration for use of words; etymology to indicate derivation; synonyms in many cases; antonyms in some cases; cross references; run-on entries under different forms of word, such as adjectives, adverbs etc.; idioms formed out of the word. There are many pictorial illustrations, including some good coloured plates.

Proper names are listed in the main text, which include biographical, geographical, mythological, biblical entities etc. Supplement of new words and additional meanings are given in the beginning. The appendix contains disputed pronunciations, rules for simplified spelling, foreign words and phrases, statistics of population.

Format is rather pleasing. The bold typefaces have been used with understanding. The illustrations are of good quality.

This is a dictionary, which has successfully attempted to define all words of English language, in active use in standard speech as well as in the literature of the present day. The emphasis is on present-day usage. It contains considerable amount of encyclopaedic information. Its revision policy is spotty, otherwise it would have become a real competitor to *Webster's third new international dictionary*. However, it is strongly recommended for libraries as second choice after *Webster's*.

Random House dictionary of the English language, edited by Jess Stein, unabridged edition, New York, Random House, 1966.

Random House is a well-known publisher òf dictionaries.

This dictionary of English language covers over 260,000 entries. An unabridged dictionary like *Webster's new international dictionary of the English language* (2nd edition, 1971) includes 450,000 entries. *Webster's new collegiate dictionary* (8th revised, 1973) contains 152,000 entries. Therefore, the present dictionary in terms of vocabulary is neither a short nor an unabridged one. Obviously, it is intended to serve the needs of the general public.

Information about each word includes (when applicable) spelling, syllabication, hyphenation and capitalization; pronunciation; grammatical designation (part of speech); inflections (when irregular); restrictive labels (such as US, Physics, Archaic); definitions (most frequently encountered definition first); idioms formed with word; sample phrases or sentences to illustrate usage; cross references; abbreviations; etymology (derivation); run-on entries (different forms of word, e.g., adjective formed from noun); synonyms (in many cases); antonyms (in some cases). Thus a great deal of encyclopaedic information has been given.

Fairly concise and usually clear definitions have been provided.

Definitions are supported by quotations, the majority of which have been framed by the editors themselves.

This is a single volumed dictionary in a pleasing format.

It contains plenty of excellent illustrations.

The dictionary contains two major supplementary sections in the form of a complete atlas of the world and four concise bilingual foreign language dictionaries—French, Spanish, Italian and German. Besides, it contains supplementary sections listing 'signs and symbols' 'a directory of colleges and universities,' 'a basic manual of style,' a list of 'major dates in world history' and a key to foreign alphabets. Almost one-fifth of the total space is devoted to supplementary sections covering encyclopaedic information.

This is the first general dictionary to have employed electronic

processing equipment in its production. Although it was published for the first time in 1966, yet it has become quite popular and well established. It does not take the place of *Webster's new international dictionary of English language* (2nd edition, 1971), *Random House dictionary* is recommended for all kinds of libraries.

Webster's third new international dictionary of the English language, unabridged with seven language dictionary, Springfield, Mass., Merriam, 1961.

Webster's International was first published in 1909. Second edition appeared in 1934 and the third came out in 1961. There is so much of variation between the second and third editions that it is considered advisable to have both editions in a library.

In 1934 edition, there were 600,000 entries. However in 1961 edition, number of entries has been reduced to 450,000. Many obsolete and rare words have been dropped but about 100,000 new entries have been added, including new scientific and technical terms.

Provides spelling, syllabication (centred period), part of speech, etymology (in Latin alphabet), definitions ("analytical one-phrase" in historical order), inflections, capitalization, illustrative quotations chiefly from contemporary sources (incomplete citations), pronunciations (indication by means of a newly devised system), labels (including field, usage, geographic) and some pictorial illustrations.

The treatment of words in this edition became a controversial point because it followed the descriptive school. Thus the label "colloquial" was replaced by the words "substandard" and "nonstandard." Much of what the third edition accepts as "standard" was labelled as "colloquial" in the earlier edition. This means that it has accepted many of the changes, which have taken place in modern usage of English language.

Unlike the earlier edition, it contains few proper names or geographical names. For instance, there are no entries for Greece, Hercules, etc. However, proper adjectives, which are common nouns formed from proper nouns have been included.

This dictionary is the oldest and most famous American dictionary, which is considered comprehensive in its coverage having no marked bias. The definitions are generally clear enough and to the point, certainly reliable. The work has been ably edited and is recommended strongly for libraries.

6,000 words; a supplement to Webster's third new international dictionary, Springfield, Mass., Merriam, 1976.

It covers "more than 6,000 words and meanings which have

become firmly established in the language since the publication of the present volume in 1961." The words have been selected largely from the current vocabulary of science, mathematics and technology. It has also covered vocabulary from subjects such as music, sports, politics, etc.

Explanatory notes given in the beginning explain the significance of different typefaces, abbreviations and the devices used, which help in the effective use of the dictionary.

Oxford English dictionary, being a corrected reissue, with an introduction, supplement and bibliography, of a New English dictionary on historical principles; founded mainly on the materials collected by the Philological Society and edited by James A.H. Murray, Henry Bradley, W.A. Craigie, C.T. Onions, Oxford, Clarendon Press, 1933, 12 volumes and supplement.

Supplement to the Oxford English dictionary, edited by R.W. Burchfield, New York, Oxford University Press, 1972-, Vol. 1-, (to be completed in 4 volumes).

The original edition was issued under the title *New English dictionary on historical principles* between 1888 and 1933 in 10 volumes and a supplement. OED is a reprint of the original edition with corrections of some typographical errors. A 4 volumed supplement is under preparation, out of which the first volume appeared in 1972 and the second volume came out in 1976. A compact edition of OED in 2 volumes appeared in 1971. Through photography, the size of the type was reduced. A magnifying lense is provided with the work to enable the users to read it.

This is a great dictionary of English language. The amount of effort which went into its preparation is really enormous. Its preparation perhaps took more time than any other work in English language. Thousands of scholars contributed to this great venture.

The purpose of the work is to trace history of English words, providing differences in meaning, spelling, usage, etc., during different periods of time. Each piece of information is supported by numerous quotations (numbering 1,827,306) from the works of more than 5000 authors of all periods.

OED contains 414,825 entries covering all words known to have been in use in English language since 1150, excluding those words which had become obsolete by 1150. According to Winchell, OED covers "(1) all common words of speech and literature, and all words that approach these in character, the limits being extended further into science and philosophy than into slang and cant; (2) in scientific and technical terminology, all words of English in form

except those of which an explanation would be intelligible only to a specialist, and such words not English in form as are in general use or belong to the more familiar language of science; and (3) dialectical words before 1500, omitting dialectical words after that date except when they continue the history of a word once in general use, illustrate the history of a literary word, or have a literary currency."[1] The supplement includes new words and senses and some corrections.

The following information about each main word is given:

The identification (usual modern British spelling; pronunciation; part of speech; specification about the specific field in which used; status if peculiar-obsolete, archaic, colloquial, etc.; earlier forms of spelling; inflexions covering plurals and principal parts of verbs when not ordinary), morphology or form history (derivation regarding origin of word; subsequent form history covering phonetic changes, corruptions, obsolescence, revival, etc), the significance (meanings arranged historically from earliest to the present, giving marking of obsolete senses, erroneous uses, etc.), illustrative quotations (these are arranged chronologically illustrating each sense of a word, giving one quotation for each century; all quotations are identified and complete bibliographical details are given in the bibliography of the last volume).

OED does not use critical judgments and of course avoids usage labels. It provides quotations in support of meanings of various words, without giving its critical judgment.

Although many sources were examined to find out the earliest recorded use of a word, yet some were missed. It is also likely that many of words were in use for number of years in spoken language before being recorded, whereby period of earliest use would be difficult to establish. It is also weak in American words.

OED is considered the most authoritative, complete, scholarly and famous English language dictionary. It is also the most quoted one. It is most useful for tracing historical or etymological (origin, history and meaning) information about a word. It contains a great deal of encyclopaedic information. No librarian can afford not to know it. However, it is not a dictionary for ready reference, for which unabridged dictionaries would be found more convenient. It is a work meant for scholars.

[1]Constance M. Winchell, *Guide to reference books*, 8th ed., Chicago, American Library Association, 1967, p. 95.

922 Hindi

Hindi shabdasagar, edited by Sham Sundar Das, enlarged and new edition, Varanasi, Kashi, Nagripracharini Sabha, 1967-, vol. 1- (to be completed in 11 volumes).

This dictionary gives definitions of words and describes the words, wherever necessary. Grammatical status of each word has been indicated. As far as possible, it has attempted to cover all the words, which have become part and parcel of Hindi language. It has also included the words, which are peculiar to various professions and vocations. Obsolete words of Hindi language which were once in use have also been covered. References to original works have been cited, where the words have been used.

923 Sanskrit

Encyclopaedic dictionary of Sanskrit on historical principles, Poona, Deccan College, Postgraduate and Research Institute, 1976-, vol. 1-.

Sanskrit is an important language being the direct source of north Indian languages and also an important auxiliary in the development of South Indian languages. There was a long felt need for such a work. It has been prepared by the staff of the Sanskrit Dictionary Department, Deccan College, Poona and the Department of Linguistics of the University of Poona under the general editorship of A.M. Ghatage. The work was started as far back as 1948. It will take many years before it is completed.

"The present volume includes the introductory material consisting of an essay dealing with the nature, scope and problems of a dictionary of Sanskrit on historical principles, a list of abbreviations of the books quoted with an indication of the author, edition and editor, and the mode of reference used, a survey of the different branches of Sanskrit learning and an approximate chronology of books in each branch, a reader's guide, and a list of general abbreviations" (vol. 1, p. v.). This is followed by dictionary proper covering part of the first letter.

"The aim of this dictionary is thus to supply the user with all the relevant information about Sanskrit words, such as their earliest occurrence, the entire range of their meanings both common and technical, their provenance at different times and in different branches of learning, their status as current or obsolete, their derivation and etymology, and the changes in their meanings in their historical development and mutual relations. The dictionary can hence be described as a well-classified and copiously illustrated stock of all Sanskrit literature" (vol. 1, p. vi).

The work when completed will prove to a mine of information on Indian civilization and scientific thought during ancient and medieval periods of Indian history.

The examination of the first volume indicates that when the set is completed then it may turn out to be a monumental work of which Indian scholarship may well be proud. This is bound to become a great lexicographical work comparable to the great *Oxford English dictionary*.

93 DESK DICTIONARIES

931 Bilingual

Bilingual dictionaries have certain special features. For instance, usually, these have limited vocabulary; provide little or no historical information; provide pronunciation; mention parts of speech and genders; give equivalents in two languages (a monolingual dictionary is confined to a single language), etc. A bilingual dictionary can be considered as a translation dictionary. Normally a translation dictionary does not define a word but gives equivalent words in two (bilingual dictionaries) or more languages (multilingual or polyglot dictionaries).

Comprehensive English-Hindi dictionary, by Hardev Bahri, 2nd ed., Varanasi, Jnanamandal, 1969, 2 vols.

The first edition contained more than 1,00,000 English words and 50,000 idioms, illustrations and significant phrases and proverbs. In the second edition, about 30,000 words, idioms and phrases, particularly useful in universities and research centres have been added.

Provides profuse list of meanings. The Hindi terms accepted by the Ministry of Education, Government of India, its Central Hindi Directorate and Standing Commission for Scientific and Technical Terminology have been printed in bold letters. Technical, scientific and learned terms have been defined and subjects in which used have been indicated. Pronunciation with accent, in *Nagari* script has been added to the English words; which is chiefly based on *Everyman's English pronouncing dictionary* by Daniel Jones and the *Oxford English dictionary*. The syllable to be stressed is indicated by the accent mark after that syllable. All Hindi words in feminine gender have been indicated by a letter F.

There are appendices given at the end of second volume. These include signs and symbols; Roman, Arabic and Hindi numerals; metric system; weights and measures; foreign exchange rates; ranks of British and Indian commissioned officers; mean solar time;

American spellings; countries and their capitals; basic English works. Abbreviations used in the dictionary are appended in the beginning of the first volume.

This is a standard work, which will be found useful by students, translators, scholars and others. This dictionary is highly recommended.

Comprehensive English-Hindi dictionary of governmental and educational words and phrases, by Raghu Vira and others, Nagpur, International Academy of Indian Culture, 1955.

"It is a complete compendium for running the administrative machinery. It registers not only single words and compounds but even the oft-used phrases (which are more or less conceptual integers to the administrator). One would find all that one may need for general administration, accounts, finance, budget, auditing, public works, industries, railways, etc." Thus it is a special dictionary and is aimed to serve the special needs.

In the beginning, a list of verbal roots, suffixes and prefixes have been listed. This is followed by special terminologies in various fields. A detailed description of how Chinese have been creating new words is also given along with illustrations.

The meanings are given from English into Hindi. The meanings given are the minimum and the examples of derivatives from these roots are also to the minimum. If necessary, the subject where used is also indicated. This is certainly an authoritative work, which will be found useful by administrators, lawyers, industrialists, scientists and teachers.

French-English science and technology dictionary, by Louis Devries, revised and enlarged by S. Hochman, 4th ed., New York, McGraw-Hill, 1976.

It contains 52,500 entries pertaining to aeronautics, agronomy, astronautics, astronomy, astrophysics, automobile technology, bacteriology, botany, chemistry, data processing, electronics, entomology, genetics, geology, geophysics, horticulture, mathematics, nuclear science and technology, oceanography, physics, radar, radio, television, zoology and others.

More than 4500 of the entries are new terms and have been given in the supplement appearing at the end of the book. The supplement also includes complete computer technology and electronic data processing vocabulary.

"Grammatical guide for translators" is an additional aid to translators. A list of general abbreviations and those used in scientific literature has also been added.

Practical Sanskrit English dictionary by V.S. Apte, edited by P.K. Gode and C.G. Karve, revised edition, Poona, Prasad Prakashan, 1957-1959, 3 Vols.

The first edition was published in 1890. This is a revised and enlarged edition. In the revised edition, some new words and some new meanings of words have been added along with appropriate quotations from various sources. Attempt has also been made to overcome the shortcomings of the earlier edition.

For each word, status, meanings, quotations and references have been given. Quotations and references have been added for peculiar and noteworthy senses of words, especially those occurring in works used by students in schools or colleges. It gives "full explanations of the more important technical terms, particularly in *Nyaya Alankara*, *Vedanta*, Grammar and *Dramaturgy*, with quotations in Sanskrit wherever necessary."

The special features of the work are (*i*) 'A concordance of terms in Sanskrit Grammars' containing over 4000 words, covering several words of grammatical significance including technical and other terms, names of authors and their works published or in manuscript form, and (*ii*) Appendix (B) containing 475 maxims.

This is a significant work, which will meet the requirements of students, teachers and scholars. It is a reliable and practically useful work, written for "Sanskrit readers in general and of the school and college students in particular" (Preface).

932 Polyglot

Bharatiya byabahar kosha, or, dictionary of sixteen Indian languages including English, Bombay, Tribeni Sangam, 1961.

This is a polyglot dictionary of 14 recognized languages of India as well as English and Sindhi.

Elsevier's dictionary of library science, information and documentation, compiled by W.E. Clason, Amsterdam, Elsevier Scientific, 1973. This is a dictionary in six languages, such as English/American, French, Spanish, Italian, Dutch and German.

The basic table consists of entries arranged alphabetically by the terms in English. Each entry contains serial number, the term in English, definition in English followed by equivalent terms in French, Spanish, Italian, Dutch and German. Each entry has been allotted a serial number. At the end, for each language (other than English), there is an alphabetical list of words referring to the basic table with the help of a serial number. Broad subject of the term has been indicated. The status of term in non-English languages has also been

marked.

The work is based on principles proposed by UNESCO. It is a useful work for those who want to study literature of library science, information and documentation in a language in which he does not have a mastery. It also serve as as a translation dictionary helpful to translators.

94 SUBJECT DICTIONARIES

Dictionaries confined to specialized subject fields, professions or occupations have their importance in a reference collection. General dictionaries are usually strong in the humanities and weak enough in the field of science and technology. Therefore, in order to overcome this weakness, a large number of dictionaries have appeared in various branches of science and technology, but fewer in the humanities. It may be remembered that the use of the word 'dictionary' in the title does not mean that the work is a dictionary. Quite often, a subject dictionary may turn out to be encyclopaedic in terms of information provided. In evaluating a scientific dictionary, one should lay more emphasis on the question of up-to-dateness. However, in the humanities, it is of less importance.

941 *Science and Technology*

Comprehensive glossary of technical terms; science, New Delhi, Commission for Scientific and Technical Terminology, Central Hindi Directorate, Ministry of Education and Social Welfare, 1973, 2 vols.

This is a glossary of the technical terms in science finalized by the Commission for Scientific and Technical terminology. It lists 1,30,000 terms in Botany, Chemistry, Geography, Geology, Home Science, Mathematics, Physics and Zoology up to the postgraduate standard. The following principles have been adopted:

"(a) International terms have been retained as such and only their transliterations have been given.

(b) Pan-Indian equivalents have been coined from Sanskrit bases.

(c) In some cases, Hindi words of regional character and some other regional words assimilated in Hindi, have been preferred to their Sanskrit equivalents on account of their common usage. In such cases, the other Indian languages are free to use current words in their own languages" (vol. 1, p. vii-viii).

Entries have been arranged alphabetically by English word. Subjects have been indicated against terms, which exclusively belong to certain subject or subjects. Thus English word is followed by the subject and Hindi equivalent in *devnagri* script. Different equivalents

of the same term have been separated by a comma, in case they can be used as synonyms. The international practice of italicising binomial names of animals and plants has been adopted in English terms and Hindi equivalents. List of abbreviations for subjects has been given separately in the beginning of both the volumes. An appendix containing Hindi abbreviations for metric units has been provided at the end of second volume.

This is an indispensable glossary of terms meant for students, translators and science writers (contributing through Hindi medium), teachers (teaching through Hindi medium). However, some of the terms may not be found acceptable and also the glossary is not comprehensive.

Concise dictionary of physics and related terms, by J. Thewlis, Oxford, Pergamon Press, 1973.

It contains short definitions of terms which are each restricted (with some exceptions) to one concept. It covers physics proper and related subjects such as astronomy, astrophysics, aerodynamics, bio-physics, crystallography, geophysics, hydraulics, mathematics, medical physics, meteorology, metrology, photography, physical chemistry, physical metallurgy, etc. The terms which have their dictionary meaning or which are self-evident have not been defined unless there is a special reason to do so. Cross references have been provided from individual terms to related terms. Symbols have been explained in each definition.

It is intended to serve physicists as well as science teachers and senior students, other scientists, who are not specializing in physics. It is a handy reference work.

Glossary of chemical terms, by C.A. Hampel and G.C. Hawley, New York, Van Nostrand Reinhold, 1976.

This is a glossary, which provides basic definitions of chemical terminology. It contains 2000 entries covering terms used in different areas of chemistry and also commonly used in chemical industries. "It covers all natural and man-made chemical elements, and the major chemical groups (aldehyde, alcohol, amino, etc). Described are all important functional terms, such as catalyst, solvent and antioxidant, as well as general terms. The more important compounds are given full attention, along with basic phenomena...."

It avoids involved mathematics and includes only those chemical formulas and structures, which are considered most essential. Words have been defined with multiple meanings. Derivations and pronunciations are given wherever required. Large number of cross references have been provided to link up closely related topics. Over 100

biographies of chemists have been included.

This is a dictionary, which will serve the needs of students of chemistry, chemical engineering and others who had only limited exposure to the field of chemistry. It is a handy source, which is quite up-to-date.

McGraw-Hill dictionary of scientific and technical-terms, edited by D.N. Lapedes, New York, McGraw-Hill, 1974.

It has been produced by the same staff which produces *McGraw-Hill encyclopedia of science and technology*. Therefore, it is an authoritative work. It provides almost 100,000 concise definitions on all fields of science and technology. There are almost 2800 illustrations (photographs, drawings, diagrams, charts and maps) to explain and clarify the various definitions. It provides cross references for synonyms, acronyms and abbreviations. Each definition is identified with regard to the field of science, to which it belongs.

The appendix contains conversion tables for measurements, list of chemical elements, symbols used by architecture, biology, business, chemistry, communications, computers, etc.

This dictionary is claimed to be world's most comprehensive single volume reference work. This is an accurate and highly reliable compilation of scientific, engineering and technical terms. It is a must for a library specializing in science and technology.

942 Library Science

ALA glossary of library terms with a selection of terms in related fields, by Elizabeth H. Thompson, Chicago, American Library Association, 1943.

This work includes, "technical terms used in American libraries, except those purely, or largely, of local significance; some terms not in current use but of historical interest; and selected terms in several fields more or less closely·related to library work, with which librarians come in contact in connection with books and the history of books, as archives, bibliography, printing and publishing, paper, binding, illustration and prints. A few types of materials used in libraries—certain kinds of reference books, for instance—have been selected for inclusion. Foreign terms, with a few exceptions have been omitted" (Introduction, p.v.).

The arrangement of entries is alphabetical. See references from synonymous terms have been provided in large number.

Appendices give tables of book and type sizes, and a list of abbreviations. Definitions taken from *ALA catalog rules* are indicated by C and Ca (if definition is changed). Terms in microphoto-

graphy are indicated by M, because these are very technical terms. Similarly in other cases, where definitions are taken from other sources, sources themselves have been cited. This is a valuable glossary for librarians, students and teachers of library science. It should be revised to incorporate terms, which have been introduced during the last three decades and also include necessary changes.

Glossary of indexing terms by Brian Buchanan, London, Bingley, 1976.

It contains nearly 1000 detailed entries. Each entry includes: a basic definition with examples where necessary; elaboration of the definition with fuller explanation or more examples; refers the user to related terms other than those covered in first two parts. Entries are arranged in word-by-word-arrangement. See references have been given from synonyms and near-synonyms to preferred terms and other suitable terms.

Some of the definitions given here are controversial in nature. In doubtful cases, as many definitions from different sources as necessary should have been given. However, this glossary has not cited the sources used for definitions, which is a drawback.

Librarian's glossary of terms used in librarianship and the book crafts and reference book, compiled by L.M. Harrod, 3rd ed., London Andre Deutsch, 1971.

It contains definitions of terms employed by librarians in various areas of librarianship as well as information science regarding areas of concern to librarians. Terms regarding book craft have been included, which would be useful for librarians. The information has been provided about international organizations. National library and related organizations in many countries have been described with special reference to the United Kingdom and the United States of America.

Usually brief information consisting of a definition has been provided in each entry. However, in few cases depending upon the importance of the term or topic more information has been given. For instance, more than a page has been devoted to *Universal decimal classification*. There are a large number of cross references referring to synonyms and related terms.

A list of acronyms and abbreviations in general use is given in the beginning. The three appendixes contain some Latin place names which are used bibliographically, with their English equivalents; subject lists of terms defined; summary of the Public Libraries and Museums Act, 1964. This is a comprehensive and authoritative glossary of terms, which will be found useful by librarians, students

and teachers of library science, and persons belonging to book trade. The definitions and explanations are clear enough.

95 DICTIONARIES OF QUOTATIONS

In a library, often the users would ask, who said this? or Do you have a source containing quotations on a given subject or by a given author? Dictionaries of quotations can provide answers to such questions. These books of quotations form a useful part of a reference collection. These may be used for the following purposes:

(*i*) Identification and verification of a given quotation.

(*ii*) Selection of a quotation required on a given topic or by a given author or for a special occasion.

In libraries, very often, the users are required to identify or verify a given quotation. Due to the reason that a book of quotations has to be highly selective, large libraries are expected to maintain a large collection of these including the old editions of such works. However, a small library can get along with one or two books of quotations. A library must possess a copy of Bartlett's *Familiar quotations*. Another well-known work is Stevenson's *Home book of quotations*. Besides, books of quotations, unabridged dictionaries, author concordances and author dictionaries may be used for locating quotations.

Familiar quotations, by John Bartlett, 14th ed., Boston, Little, Brown, 1968.

The work is an anthology of 20, 421 quotations consisting of passages, phrases and proverbs from the world's great literature, from ancient Egypt to the present times.

Quotations have been arranged chronologically under 2250 authors in the main part of the book. This is followed by a shorter part containing anonymous quotations, and passages from *the Bible, the Book of Common Prayer* and *the Koran*.

Indexes by subject, author and keywords of the quotations or verses have been provided. Indexes are detailed enough so that a person with a vague idea regarding a quotation may still be able to find it. However, in order to get the best out of this work, one should read the explanation given on pp. xv-xviii. It contains birth and death dates of authors. It gives historical footnotes, which sometimes trace back to the original quote. These give background and also references to similar phrases made use of by different authors. Records exact references adequate for the location of original.

In every new edition, some old quotations are dropped and a few

new ones added. As such older editions have value of their own. This edition contains quotations from leading personalities of 20th century, such as, Jawaharlal Nehru, Adlai Stevenson, etc. It is the most famous book of quotations. It is comprehensive, accurate and easy to consult. It is extremely useful to one who wants to find out, who said that or wants to locate a quotation to suit a particular occasion or on a given subject.

Home book of quotations, compiled by Burton E. Stevenson, 10th ed., New York, Dodd, Mead, 1967.

The main part contains 700,000 quotations. The quotations are arranged alphabetically under topics, A-Z. The subarrangement is by smaller topics, as necessary. Under each smaller topic, further arrangement is alphabetical by author.

There are detailed indexes providing approaches through author, subject and keywords of quotations or verses. However, the author index does not provide entries under Shakespeare and Pope because quotations by them are too many.

For each quotation, exact reference to the source is cited. Cross references to similar or related topics have been provided. Brief biographical data on authors is also given. The subject arrangement of quotations brings together quotations on a particular theme. In case, one wants to identify a quotation, which he does not remember exactly, then one should use index and concordance. If he remembers the author and can vaguely recollect the quotation, he better look under the author index. Two appendixes of added quotations have been given.

This work is a comprehensive and well-selected collection of quotations.

Bartlett's unfamiliar quotations, compiled by L.L. Levinson, London, Allen and Unwin, 1972.

Author is a well-known writer and author.

This is a compilation of unusual items of "pointed, quaint, tongue-in-cheek comments that reflect life and living today, of twisted sayings, polluted proverbs and off-beat, wise-saws. ' It does not contain any well-worn cliches or old homilies.

Approximately 5000 quotations, including a large number of original contributions by Levinson himself have been' listed. These have been selected from diverse sources.

Subjects have been listed first alphabetically. Within each subject further arrangement is alphabetically by first word of quotations. At the end of each quotation the name of author is provided. Anon refers to Anonymous author. In some cases, instead of name of

author, name of language has been given (e.g. Italian proverb, German proverb, Spanish proverb, English proverb) or Title of the periodical publication (e.g., New Statesman) or just Proverb or LLL (the author himself).

The quotations are of unusual type, unfamiliar in nature but interesting. It provides only subject approach, bringing together quotations on a common theme. It does not have an index, which reduces its reference value considerably.

.96 SYNONYMS AND ANTONYMS DICTIONARIES

General dictionaries, usually include synonyms and antonyms in their word entries, but there are a large number of dictionaries, dealing with these only. A book of synonyms is apt to give more discussion and examples than a general dictionary. However, these must be used with caution. In case, one wants to use two or more synonyms, then one should be sure about the difference in their meanings. Otherwise one must consult a good dictionary to know the correct difference in meanings. A book of synonyms is very popular in public libraries. It is extremely useful to authors, those who are interested in solving crossword puzzles and increasing command of the language. The best known work is by Peter Mark Roget (1779-1869). He aimed to classify all human knowledge under a series of verbal categories.

Roget's international thesaurus, 4th ed., New York, Crowell, 1977.

Originally, it was compiled by Peter M. Roget.

It lists synonymous words. We may call it a word finder because it groups related words together so that a user can easily locate the exact word which might serve his requirement to express his idea suitably.

The synonyms are grouped according to subject categories or ideas in the main part of the work. Index guide forms second part of the book, which is arranged alphabetically. First consult index guide under the word or idea for which list of synonyms is required. The index will direct one to the main part through a subject category number. It also provides antonyms.

This dictionary does not define and distinguish between different synonyms, therefore the user should know the connotation of the words being consulted so as to use the dictionary properly. This means that a user must have a good understanding of the language or consult a good dictionary to choose appropriate synonyms. This is the best-known dictionary of synonyms. This is comprehensive as

well as easy to consult.

Webster's new dictionary of synonyms, Springfield, Massachusetts G. & C. Merriam, 1968.

This is "a dictionary of discriminated synonyms, with antonyms and analogous words (near synonyms) and contrasted words (near antonyms)." The main entry under a given word gives its meaning, use, closest synonyms and a list of analogous words. Cross references to analogous words or antonyms are indicated by means of an asterisk (*) being prefixed to the words.

All words are arranged alphabetically. By looking under a word one is able to find many synonyms. Shades of meanings have been explained and also illustrated with suitable quotations. Antonyms and contrasted words are listed after the related main entries.

In spite of the provision of cross references, it is not easy to locate all the words. However, it is easier to consult than *Roget's international thesaurus*.

The introduction is an excellent survey of the history of English synonyms. A student of library science should go through it.

This is quite a comprehensive work and is considered to be the most useful dictionary of synonyms.

97 DICTIONARIES OF USAGE

Good dictionaries do indicate varying usage of words through examples in the form of quotations or sentences constructed by the editors themselves. However, these do not provide reasons for varying usage. For this purpose, one is required to consult dictionaries of usage. These indicate the current good usage as well as the structural errors and ambiguities, which should be avoided by authors,s peakers and others in everyday usage of the language concerned. But one should keep in view that dictionaries on usage vary a great deal in their content and each one of these represents the views of their individual compiler(s).

Dictionary of modern English usage, by Henry Watson Fowler, 2nd ed., revised by Ernest Gowers, New York, Oxford University Press, 1965.

An ordinary dictionary may give examples of varying usage through quotations without mentioning reasons. On the other hand a dictionary of usage concentrates on prevailing faults of present-day speech and prose, this is what this *dictionary* attempts to achieve. This is a guide to usage with regard to grammar, syntax, style, idioms and choice of words. It also guides in the matter of

spelling, pronunciation, punctuation and inflections (formation of plurals, etc).

Entries are arranged alphabetically, beginning with an article on the proper use of indefinite articles like 'a' and 'an' and end with an article on the use of 'zz,' which occurs at the end words like buzz, fizz and jazz. In spite of the provision of cross references, occasionally, it becomes difficult to locate the required information. It may be mentioned that this dictionary follows British pronunciation, spelling, and punctuation.

This is a famous work, written in lively literary style from British point of view. This is an extremely useful work for a layman, who wants to know the distinction between good and bad usage. This serves as a fine work for those who want a dictionary to be a prescriptive one.

98 INFORMATION THAT MAY BE LOCATED IN DICTIONARIES

(*i*) What is the meaning of:
  (*a*) Boston Tea Party,
  (*b*) Nuclear fission,
  (*c*) Gestalt,
  (*d*) Social medicine,
  (*e*) Inflections, and
  (*f*) Thesaurus.
(*ii*) What does the following stand for:
  (*a*) CWT,
  (*b*) "op. cit.,"
  (*c*) Ibid.,
  (*d*) UNESCO,
  (*e*) IFLA,
  (*f*) "o.p.,"
  (*g*) ICAAAA,
  (*h*) MARC,
  (*i*) INSPEC, and
  (*j*) UNCTAD.
(*iii*) What is the meaning of following foreign terms, which are used in English language:
  (*a*) Sine qua non,
  (*b*) Modus operandi,
  (*c*) Ad hoc,
  (*d*) Vis-a-vis,
  (*e*) Resume,

    (*f*) Fait accompli,

    (*g*) De facto

    (*h*) De novo, and

    (*i*) Ab initio.

(*iv*) Name the sources of information for following quotations:

    (*a*) "Some are born great, some achieve greatness and some have greatness thrust upon them,"

    (*b*) "Ah, why should life all labour be?",

    (*c*) "I have brought peace with honour,"

    (*d*) "I myself am Heaven and Hell,"

    (*e*) "Early to bed and early to rise makes a man healthy, wealthy and wise," and

    (*f*) "If the nose of Cleopatra was shorter, the whole face of the earth would have changed."

(*v*) What is the origin of the following words:

    (*a*) Library,

    (*b*) Library catalogue,

    (*c*) Science,

    (*d*) Anthropology,

    (*e*) Almanac,

    (*f*) Biochemistry, and

    (*g*) Gentleman.

(*vi*) Give synonyms and antonyms for the following words:

    (*a*) Abandon,

    (*b*) Compulsion,

    (*c*) Cooperation,

    (*d*) Health,

    (*e*) Layer,

    (*f*) Formal, and

    (*g*) Cruel.

(*vii*) What is the difference between the following pair of words:

    (*a*) Civilization and culture,

    (*b*) Effect and affect,

    (*c*) Bilingual and multi-lingual,

    (*d*) Border and boundary line,

    (*e*) Foolish and silly,

    (*f*) Conference and seminar, and

    (*g*) Lay and lie.

991 CONCLUSION

A dictionary is usually the first source to be consulted for deter-

mining the definition of a word. Obviously no library can do without it. A small library should have a couple of dictionaries to serve its requirements. Maybe it would not be able to afford an unabridged dictionary. However, a large library should have a large variety of dictionaries including unabridged dictionaries.

Due to encyclopaedic nature of large English dictionaries, one can use these for obtaining information other than about words. For instance, one may use these to identify and verify a quotation, to identify a personal name from history or mythology, to obtain illustrations on a topic, flags of nations, marks commonly used by proof readers, charter of United Nations, population figures, etc.

A dictionary should be purchased very cautiously because these are expensive sources of information. Sometimes, an unscrupulous publisher may offer a reprint of an early work with hardly any revision or it may have been compiled by incompetent editors. The one to be chosen must be an authoritative work. The same can be said about a dictionary to be used for reference service.

FURTHER READING

Frances Neel Cheney, *Fundamental reference sources*, Chicago, American Library Association, 1971, Ch. 4, pp. 286-88.

George H. Douglas, "What's happend to the thesaurus?" *RQ*, Winter 1976, pp. 149-155.

Denis Grogan, *Science and technology; an introduction to the literature*, 3rd ed., London, Bingley, 1976, Ch. 4.

William A. Katz, *Introduction to reference work*, 3rd ed., Vol. I, New York, McGraw-Hill, 1978, Ch. 8.

Lours Shores, *Basic reference sources*, Chicago, American Library Association, 1954, Ch. 2.

Kenneth Whittaker, *Dictionaries*, Bombay, Asia Publishing House, 1966.

11 ENCYCLOPAEDIAS

0 INTRODUCTION

AN encyclopaedia is a work, which represents synthesis of knowledge. It attempts to bring some order to the knowledge, reflecting state of knowledge as it exists during the period of its compilation. Earlier encyclopaedias were intended for intellectual elite but presentday encyclopaedias are directed mostly to general readers. Now-a-days, many encyclopaedias are being brought out, which are directed towards a particular kind of readership. The contents and the style of writing are adopted to serve the requirements of these, such as children, laymen, specialists in the subject, young people, etc. Usually readers expect anything and everything from a general multi-volumed encyclopaedia, such as *Encyclopedia Americana* or *New encyclopaedia Britannica*. However, no encyclopaedia can claim to be complete and inclusive. Therefore, the editor of an encyclopaedia has to use his judgment to provide right kind of articles to serve the requirements of expected audience in an effective manner.

A modern encyclopaedia is a product of a large team of persons including editors, consultants, contributors, etc. The making of an authoritative encyclopaedia is a big and highly expensive venture. Reputable publishers spend a great amount of money and efforts to bring out an authoritative work. The cheap works brought out by unscrupulous publishers abound, therefore, one should be careful in selecting encyclopaedias. Due to explosion of knowledge and the cost involved, it seems that general encyclopaedias will not multiply. However, the number of specialized encyclopaedias is increasing at a fast rate.

1 DEFINITION

An encyclopaedia is a compendium of knowledge. Knowledge is related to kind of readership, which an encyclopaedia intends to serve. An encyclopaedia can either be general or a specialized one.

The general encyclopaedia is a work containing informational

articles giving essential general information on subjects in various branches of knowledge, arranged alphabetically by subject and names.

The specialized encyclopaedia is a work containing informational articles giving essential general information limited to a special field of knowledge or area of interest, arranged alphabetically by subject and names.

A general encyclopaedia is a systematic summary of all information, which may be considered significant to mankind. Similarly, the same can be said about a specialized encyclopaedia in the concerned field of knowledge or area of interest.

2 IMPORTANCE

The importance of an encyclopaedia can be realized from the fact that it is regarded as a backbone of reference service. These are most used reference books. In those libraries, where reference questions belonging to the category of background questions predominate, the encyclopaedias get used heavily.

3 PURPOSE

An encyclopaedia is a storehouse of knowledge giving all information of significance. However, it is best used for finding answers to background questions related to general information and self education for both the specialist and the layman. The primary value lies in the fact that it provides an overview for various topics, which can be highly useful for one who is dealing with a subject about which he hardly knows anything. This may be true for a specialist in a subject or a student or a layman.

The background questions are usually framed by the user in the following ways:

"I want something on. . . ."
"I want to know something about. . . ."
"I want general information on. . . ."
"I want to know all about. . . ."

Thus the questions given below may be considered as background questions:

I want to know something about television.
I want general information on flood control.
I want to know all about John Dewey.

I want to know all about how boats are manufactured.

Besides providing background information, encyclopaedias can also serve the following purposes:

(*i*) Provide facts,

(*ii*) Provide illustrations (children's encyclopaedias are especially useful for coloured illustrations).

(*iii*) Provide ideas of a particular period (earlier editions of encyclopaedias can also be used for this purpose),

(*iv*) Provide different point of views on a given topic (by reading the description of a topic in different encyclopaedias),

(*v*) Provide valuable bibliographies, which are appended to principal articles. These assist a reader to locate additional readings on a given subject. This can be useful for a specialist or a student or layman depending upon the nature of bibliographies provided.

A user or even a librarian should start from an encyclopaedia, if he knows nothing or next to nothing about the subject in hand. It can also be useful, if one wants to revive one's knowledge. However, very often it can serve only as introduction and for further information one has to consult specialized sources of information. The encyclopaedias on specific subjects provide detailed information.

It may be remembered that no general encyclopaedia should ordinarily be considered as a proper source for research. The same does not apply to special encyclopaedias.

4 KEEPING UP-TO-DATE

It is essential that an encyclopaedia brought out by a publisher at an enormous cost should be kept up-to-date. The universe of knowledge is dynamic, every now and then, new discoveries or inventions or theories come into being rendering considerable portion of the set out of date.

To deal with the above problem, encyclopaedia supplements, annuals or yearbooks are brought out. A yearbook may be issued on annual basis. Reputable publishers prefer this approach. Examples are *Britannica book of the year* and *Americana annual*. *Britannica book of the year* serves as a supplement to the parent work entitled *New encyclopaedia Britannica*. It updates the *Britannica* and also points out to the more extensive treatment given by the parent work by means of a code. Thus, there is a close relationship between the two.

The purpose of encyclopaedia supplement is to provide with information, which brings the articles in the basic set up-to-date.

Experience shows that these are mainly useful for general reading and browsing and for summaries of significant events. Therefore, these are less useful for systematic updating of basic sets of encyclopaedias concerned.

In addition to the above mentioned supplementary devices, an encyclopaedia itself may be revised according to one of the following two plans:

Periodical revision. Under this plan, the entire set of the encyclopaedia is reset. Fourteenth edition of *Encyclopaedia Britannica* was issued in 1929. Its continuous revision policy was established in 1932. It was only in 1974 that the fifteenth edition came out. This is an example of periodical revision. *Chambers' encyclopaedia* (Elmsford, New York Maxwell Science International) does not follow the policy of continuous revision. A revised new edition is brought out every 10 to 20 years.

Continuous revision policy. Now-a-days, most of the good general encyclopaedias including juvenile encyclopaedias prefer the policy of continuous revision. In order to pursue such a policy, editorial staff, surveys the subject fields constantly. The revision is planned in such a way that at the time of each successive printing of an encyclopaedia, changes are incorporated to bring some of the articles up-to-date keeping in view the changes, which may have taken place regarding contents, countries, states, cities, towns, etc., as well as on various subjects. In many of the encyclopaedias, all the articles in a given subject field or specific volumes are revised at the same time. Besides some topics may be changed in parts only.

As a result of continuous revision policy, certain topics would remain unchanged for many years. But, there are some subjects which require changes to be made with every printing because of constant new developments. However, large portion would remain stable and be not in need of revision.

Since early 1960's *Encyclopedia Americana* has been following the policy of continuous revision. With each printing, changes are incorporated and updating done throughout the set. As a result, a few entire volumes are reset each year, adding new articles, covering new subjects, deleting and revising articles. For instance in 1969, volumes 7, 8, 9 and 15 were reset. Besides, minor changes in volumes no reset are made with each printing.

Many of the encyclopaedias, following continuous revision policy make tall claims. On examination, one very often finds a big gap between the claims made and actual revision carried out. The major general encyclopaedias give more attention to science and technology

and neglect the humanities and the arts.

5 LIMITATIONS

Some of the major limitations of encyclopaedias are described below:

(*i*) Due to the dynamic nature of universe of knowledge, encyclopaedias become out of date very soon. The supplements or yearbooks to encyclopaedias aim to fill up the gap but these are not able to serve the purpose fully;

(*ii*) Because of the problem of space, editors are forced to drop many fine articles in successive editions. As a result a library is forced to keep different editions of a given encyclopaedia;

(*iii*) Very often bibliographies appended to articles or given elsewhere in the work are not exhaustive and are not up-to-date;

(*iv*) Many of the encyclopaedias are biased to a particular point of view or country. This leads to shortcomings in the encyclopaedias;

(*v*) Due to the vastness of knowledge, no encyclopaedia can be best in all the fields. It cannot give detailed information on all fields. However, a specialized encyclopaedia (if it exists) is more likely to provide detailed information in the area of its specialization.

(*vi*) Up to forties, it was considered possible for a general encyclopaedia to provide a comprehensive summary of all that was known. Due to explosion of knowledge, a stage has been reached, when a general encyclopaedia can possibly provide a summary but cannot be comprehensive in all fields of knowledge except in a selected few. Therefore, there is a trend to bring out encyclopaedias in a given subject and provide a comprehensive summary. This has been achieved in *McGraw-Hill encyclopedia of science and technology* and *International encyclopedia of social sciences*.

6 TRENDS

At one time, these were considered scholarly works meant for scholars only. However, at present, these try to combine the authority and readability.

7 CRITERIA FOR EVALUATION

In order to make the best use of encyclopaedias, it is essential to acquire a thorough understanding of them. This can be achieved to

a large extent by evaluating these and laying down criteria for their evaluation. The checklist for the evaluation of an encyclopaedia for the purpose of its study should consist of authority, scope, treatment, arrangement, format, special features and conclusion.

71 *Authority*

The work should be authoritative. In other words, it should be accurate and dependable. The authoritativeness of an encyclopaedia can usually be judged on the basis of the qualifications, experience, reputation and responsibility of the sponsoring body (if any), publisher, distributor, authors, editors. The knowledge regarding the subject, and academic qualifications of the authors and editors are extremely important in this context.

72 *Scope*

The scope of an encyclopaedia can be understood properly by finding out answers to the following questions:

What is the purpose of the work as stated by the editor himself? Has this purpose been fulfilled in the main work?

Does it follow a definite plan consistently? What is the extent of supervision provided by the editor(s)?

What are the limitations with regard to subject, class of readers, up-to-dateness of materials? Is the emphasis on reading for self interest or provision for fact finding? What is the overall coverage?

73 *Treatment*

How thorough, reliable and complete are the facts, statistics, place-names, personal names, etc.?

Does it show any bias on controversial topics? Has the space allocated for a topic related to the importance of the topic?

Has the work been written for scholars or laymen, adults or children? How readable is the writing?

74 *Arrangement*

Arrangement is of utmost importance. It is essential that one should be able to locate information easily and quickly. This will add to the value of an encyclopaedia.

The arrangement of main text can be alphabetical (by large subject or small topic) or classified or some other. The kind of arrangement used should have a sound basis.

The index to the main text is extremely important. It should be a detailed index complemented by cross references. The index can be

alphabetical or classified or some other.

75 Format

Format refers to binding, quality of paper, typefaces, page make-up, illustrations, plates, diagrams, maps, etc.

Is the binding attractive and suited for heavy wear and tear?

Is the paper of good quality?

Are the headings and subheadings bold enough to stand out clearly? Are typefaces clear and legible? Has suitable difference been made between different types of headings or not?

Is layout of the page attractive, leaving sufficient margin for rebinding? Are illustrations, plates, diagrams, maps, etc. of good quality and well produced?

76 Special Features and Drawbacks

What distinguishes it from other encyclopaedias?

Does it include supplementary lists or appendices?

Are the bibliographies up-to-date and useful?

What are the supplementary devices used to keep it up-to-date (issuing of a supplement or yearbook on annual basis or loose leaf insertions)?

What is the policy of revision (Periodical revision or continuous revision)? Is it satisfactory?

77 Conclusion

Conclusion should provide overall judgment about the encyclopaedia. Should it be recommended for a library or not? If so, indicate the kind of library which will benefit most.

8 GENERAL ENCYCLOPAEDIAS

A few leading general encyclopaedias are described below:

Hindi visva-Bharati: Jnan-vijnan ka pramanik kosa, edited by Krsnavallabh Divedi, revised edition, Lucknow, Hindi Vishva Bharati, n. d., 10 vols.

This is an encyclopaedia in Hindi for children. The editor and the contributors are authorities in their field. The articles are long ones, some are as long as 30 to 40 pages. The names of authors, along with the particular articles contributed by them are listed in the contents page of respective volumes. Contents page of each volume also contains the list of headings used in each article. There are a large number of illustrations including a few plates. This is a useful

work and is recommended for school and public libraries.

Hindi visvakosa, Varanasi, Nagripracharini Sabha, 1960-1970, 12 volumes.

This is an encyclopaedia in Hindi for a layman. The editors, consultants and contributors are well-known authorities. It contains articles, varying in length from a short paragraph to a few pages. The articles are usually short and these are signed. Topics of special interest to Indians have been provided with greater details. The illustrations have been provided in the form of plates (usually black and white), figures, maps, etc. The index running into sixty-eight pages has been provided in the last volume, which is certainly inadequate. This is recommended for different types of libraries for Hindi knowing user.

New encyclopaedia Britannica, 15th ed., Chicago, Encyclopaedia Britannica, 1974, 30 vols.

The first edition of *Encyclopaedia Britannica* (3 volumes) was completed in 1768 (published between 1768 and 1771). The articles were brief. The first eight editions are mainly of historical interest. The 9th, 11th, 14th editions and their supplements are still useful in certain ways. Ninth and the eleventh editions are landmarks being works of great scholarship. *Encyclopaedia Britannica* completed 200 years in 1968.

Fourteenth edition was published under the title *Encyclopaedia Britannica* in 1929. It lacked a distinct character of its own and is considered to be more of a compendium of facts. Maybe it was due to the fact that its control was changing from British hands to Americans. Fifteenth edition appeared in 1974 under the title *New encyclopaedia Britannica*. Fifteenth edition is the work of an editorial staff of hundreds, an advisory staff of more than 200 and more than 4,000 contributors (half of whom belong to United States). The contributors include distinguished authors like Arthur Koestler, A.J. Toynbee, and Robert Nisbet. Some of the contributions are of the highest quality reminding one of the eleventh edition, which had earned a high reputation.

Britannica, consists of 3 parts, namely, micropaedia (ready reference and index) (10 vols), macropaedia (knowledge in depth) (19 vols) and propaedia (outline of knowledge) (1 vol). It contains 42 million words, contributed by 4,000 contributors.

Micropaedia contains brief factual information (knowledge in brief). In other words, it contains information in capsule form. It lists 102214 entries ranging from a few lines up to 750 words each. It performs the function of ready reference, providing pin-pointed

information to queries. Micropaedia also serves as an index to the set. It contains references to detailed articles in the macropaedia on the same subject. There are plenty of illustrations. In nutshell micropaedia performs *reference function and index function.*

Macropaedia contains knowledge in depth providing "more extended treatment of fields of human knowledge and major topics of human interest " It aims to educate serious readers, who are interested in studies in depth. It contains 4207 monographic articles (articles in depth) on broad topics spread over 22,000 pages. None is less than 1000 words in length. Articles are signed and by authorities. These are provided with brief annotated bibliographies. Some of the entries are as long as a book. 175 pages are devoted to western literature. Thus macropaedia aims to perform *educational function.* There is a lack of proper index to Macropaedia. This needs to be overcome.

Propaedia is an innovation, *giving an outline of knowledge and guide to the set.* This owes its origin to Professor Mortimer J. Adler, director of planning of this edition. Adler belongs to neo-Aristotelian school of philosophical thinking. Therefore, Aristotelian thinking prevails in the pages of propaedia. It may be pointed out that this volume is too complex to use. Therefore, its usefulness is doubtful.

The outline of knowledge has been divided into ten segments and conceived of as the circle of learning. Thus universe of knowledge has been considered to have neither a beginning nor an end, and also without any hierarchy.

New encyclopaedia is excellent for scholarly treatment of articles. However, it is more suited to serve the requirements of above average educated layman. On complex or technical subjects, the articles presuppose background on the part of the reader.

There are plenty of illustrations and maps spread over the whole text. Tables and charts have been used extensively in micropaedia.

Quality of writings in macropaedia is high. There are some articles, which indicate ideological prejudices. There are some contributors, who are really not outstanding in their field such as some of the Indian contributors. Many of the intellectuals who are radical or unorthodox are also found missing as contributors.

The major headings in propaedia are too broad and heterogeneous to the extent that it is rather difficult to consult it. Therefore, it should not be surprising that it will merely serve as an experiment and users are least likely to consult propaedia. One very much misses the analytical index of the previous edition. Therefore, for a few

years libraries would have to keep the 14th edition on their reference shelf. It is suggested that the editors should have taken advantage of expertise of library classificationists to prepare the propaedia.

Britannica book of the year has been brought out on yearly basis since 1938. This work serves as a supplement to *New encyclopaedia*. It updates the set and also points out to the more extensive treatment provided in *New encyclopaedia* by means of a code.

The present edition has adopted a revolutionary approach and at the same time is a great improvement over the fourteenth edition. The fifteenth edition has distinct American flavour. Due to its editorial control being with the University of Chicago, there are influences of Aristotelian thinking visible in the *New encyclopaedia Britannica*. However, it must go to the credit of Board of editors that the philosophy behind the work is well thought out and clear in the matter of details. It has succeeded very well in performing both informational and educational functions. This work has become an institution in its own right. Every library, which can afford to purchase it must have it. We do hope that the next edition will be truly an international one.

Encyclopedia Americana, New York, Grolier, 1976, 30 vols.

This encyclopaedia is based on the seventh edition of the German encyclopaedia *Brockhaus konversations—lexikon* (published 1827-29). It was first published between 1829 and 1833 containing articles translated from the German work. The first edition as a new work appeared in 1903-1904. This was followed by several partial revisions. One edition came out in 1912 under the title *The Americana*. 1918-20 edition was a completely revised edition. This has formed the basis of later editions.

Editors, consultants, and contributors are well chosen. These lend authority to this work. There are about 6000 contributors to the 1973 edition. Normally, the contributors are scholars and authorities in their field. Most of them have an academic affiliation of one kind or other.

Americana is a general encyclopaedia, which aims to serve a wide range of readers. The contributions are written to serve the needs of nonspecialized readers. The contributors are instructed to present facts and interpretations in an orderly manner, using direct style. The emphasis being on readability. However, it may be added that scholarship has not been abandoned for the sake of readability. Over the years, the ratio of signed to unsigned (presumed to be written by staff) articles is increasing. This is a good sign.

Since the early 1960's *Americana* has been following a continuous

revision policy. Under this policy, the following two approaches have been practiced simultaneously:

(*i*) At the time of each printing, changes are incorporated and updating is put into practice throughout the set;

(*ii*) Besides the above, selected entire volumes are completely reset each year. In these volumes major changes are incorporated such as new articles, deletions, new subjects etc. For example, volumes 7, 8, 9, and 15 were completely reset in 1969. Changes in volumes not reset are usually of minor nature.

Americana annual has been brought out since 1923. It records the major developments taking place each year. It helps to keep the basic work up-to-date.

Americana contains a series of historical essays covering each of the century. Glossaries defining technical or difficult terms are given in the concerned articles. A full list of glossaries has been indexed under the term *glossary.* There are separate articles on important works of literature, philosophy, and economics and on major operas. Similarly, there are articles to be found on significant historical documents.

Generally bibliographies have been provided for major articles. In many cases bibliographies have been appended on minor subjects. Often, these are not up-to-date. Bibliographies have been given to identify the sources forming basis of the articles and to assist the readers to go beyond the articles to get additional information.

In the 1969 edition, there are about 19,000 illustrations. There are 1478 coloured photographs. Besides, 589 and 347 black and white text maps, colour maps are given.

The index is a detailed analytical one, 1973 edition contains 350,000 entries. The index volume contains a clearly written guide to the use of the index.

The typeface is attractive and highly legible one. The library edition has sturdy binding. The volumes lie flat when opened. The inside margins are adequate.

This encyclopaedia is strong about subjects of American interest such as American history, geography, and biography. The fields of science and technology seem to be well covered and articles in these areas are readable, accurate and fairly up-to-date. In general, the *Americana* is weaker in music, fine arts and architecture.

Americana lays emphasis on popular treatment of articles to the extent that even complex topics or ideas have been dealt in such a way that even an average educated layman can follow these to an appreciable degree. *Americana* is generally reliable and extremely

useful for ready reference work, which has undergone significant revision over the years. There is a need for complete revision similar to that of Britannica. Recommended for libraries of all types, which can afford it.

Collier's encyclopedia, New York, MacMillan Educational, 1976, 24 volumes.

Editors and contributors have been chosen carefully. They are authorities in their fields. The publisher is a large publishing house, which has a high reputation.

This is an adult general encyclopaedia, but also useful for senior school students as well as college students. The treatment is popular, often resembling journalistic approach. The aim being to make the contributions as interesting as possible. Even complex subjects have been dealt with in a lucid manner.

The articles follow a carefully designed pattern. Thus definition, simple explanation and bare facts are presented early in the article. There are numerous short articles but broad treatment is preferred.

Collier's contains hundreds of tables and charts, photographs and drawings. The final volume number 24, includes a consolidated bibliography, a study guide and analytical index to the set. The index is accurate and also adequate. The articles have been arranged in a letter-by-letter sequence.

Collier's follows the policy of continuous revision. It is reasonably good for information of recent nature including up-to-date statistics. *1976 yearbook* covers the year 1975, serves as an annual supplement to *Collier's encyclopedia* and *Merit students encyclopedia.*

Today, *Collier's encyclopedia* is recognized as one of the leading English language general encyclopaedia. This encyclopaedia has an appeal for wide cross section of readership, including laymen, senior school students, college students. Thus it is recommended for school, college, university and public libraries.

91 SPECIALIZED ENCYCLOPAEDIAS

A few specialized encyclopaedias have been described below to serve as examples:

Encyclopaedia Indica by Jagdish Saran Sharma, New Delhi, S. Chand, 1975.

This provides information about India in compendium form. "Brief essays and write-ups on subjects (arranged alphabetically), such as animals, architecture, art, battles (from ancient period to date), biographies (of all eminent persons covering several centuries),

birds, castes, commissions and committees (of historical importance), costumes, creeds, crops, culture and civilization (subjects related to), customs, dances (classical and folk), diplomats, drama, dresses, dynasties, education (elementary, secondary, higher), epics..." (p.x). This shows the variety of subjects covered.

The total number of entries is over 8000. This is a useful work, giving over view knowledge, covering a vast field.

Encyclopedia of library and information science, New York, Dekker, 1968-, volume 1-. (So far 25 volumes have been published.)

This encyclopaedia contains signed articles by qualified contributors. The articles vary in length from few pages to long monographs. The topics dealt with include articles on literature of individual fields, library service in various countries, biographies of leading figures in library science and related area, types of libraries, etc. The articles are generally well written and illustrated, and data in the form of tables has been provided wherever needed. There is a great stress on providing information of historical interest.

The list of contributions to a particular volume is given in the beginning of each volume.

Cross references have been given, where necessary. Most articles have been provided with extensive list of references/bibliographies.

Interim index to volume 1-5, is given in volume 6. This index is basically an alphabetical specific index using the multi-entry principle. The lack of index to rest of the volumes is a big handicap. The composition of the advisory board as well as the names of authors clearly underline the American orientation of the publication. This is also indicated by the topics covered and the information provided in the articles.

This work is claimed to be the first complete and authoritative work on library science and information science. This encyclopaedia is certainly an important landmark in the history of library science and information science. It should be of immense value to librarians, information scientists and computer scientists.

Encyclopedia of microscopy and microtechnique, edited by Peter Gray, New York, Van Nostrand Reinhold, 1973.

The articles have been prepared by several hundred contributors, who are specialists in their fields.

This encyclopaedia provides comprehensive coverage of microscopic instruments, techniques, and applications. It aims to provide information about instruments and techniques as well as guidance regarding their application to specific objects and problems.

The articles have been arranged alphabetically.

Each article is signed and provided with suitable headings and subheadings.

Each article is well illustrated with diagrams, tables, photographs, etc. An up-to-date list of references has been provided at the end of each article.

There is a detailed index given at the end, which leads one to the precise information.

This work will prove useful to biologists, chemists, physicists, geologists, medical researchers, and industrial researchers in a wide range of areas including petrochemicals, plastics, wood, paper and brewing.

Encyclopaedia of religion and ethics, edited by James Hastings, etc., Edinburgh, Clark, 1908-27, 12 vol. and index.

The work is edited by James Hastings, who is considered an authority. The articles are all by specialists and are signed.

The work is a special encyclopaedia, which is comprehensive in the concerned fields. The fields covered include, "all religions of the world, ethical systems and movements, every religious beliefs and customs, philosophical ideas, moral practices, related subjects in anthropology, mythology, folklore, biology, psychology, economics and sociology, and names of persons and places connected with any of these subjects."

The treatment is scholarly in nature but readable. "Every subject has been described comprehensively in one general article, then one or more particular topics touched by the general article have been dealt separately and fully described." There are a number of comparative articles on certain topics.

13th volume is an index volume consisting of subject index, index of foreign words and of scripture passages and complete list of contributors. The subject index covers a wide range of subjects. An attempt has been made to bring together related topics under important headings.

This is the most useful and comprehensive work in the fields of religion and ethics.

International encyclopedia of social sciences, edited by David L. Sills, New York, Crowell, Collier and MacMillan, 1967, 16 vol. and index.

This is an authoritative work of international level. Well-known scholars have assisted as editors, consultants and contributors, who are from all parts of the world.

This work is a compilation of essay-length articles on important topics in social sciences. The social sciences cover subjects which

deal with the relationship of man to society. The fields covered include anthropology, economics, geography, history, law, political science, psychiatry, psychology, sociology, and statistics. Statistics has been included because it is applied for gathering and interpretation of data. The coverage of concerned fields is extensive.

The articles have been written by authorities in their field. This encyclopaedia has been prepared for social scientists rather than for general readers. However, most of the articles have been written with clarity. The articles describe "the concepts, theories, and methods" and empirical regularities, which characterise the social sciences. The articles reflect contemporary trends.

The arrangement is alphabetical and follows letter by letter arrangement. It has been claimed that the work follows self-indexing "that is, the articles themselves and the cross references that lead to them constitute a partial index."

The last volume consists of three kinds of indexes, namely, the main alphabetical exhaustive index (listing subjects, names and article titles), an alphabetical list of all articles in the encyclopaedia (each title of article is followed by the name of its author) and a classified list of articles (listing all essays in the work under 29 major fields such as anthropology, political science, psychiatry, etc). The index is an exhaustive one and an extensive system of cross references is also provided.

The type faces are bold. Headings and subheadings have been provided. The diagrams and graphs have also been given. This is a unique work of its kind, which provides extensive coverage of all the disciplines of the social sciences and summarizes the achievements of social sciences in a remarkable manner. Compared to its predecessor, *Encyclopedia of the social sciences*, it is more wide in scope. The provision of 600 biographical articles on persons who have made significant contribution to the social sciences is a special feature. Biographies of living persons are included but those born after 1890 are excluded. At the end of each article excellent long bibliographies are appended.

This encyclopaedia provides for the scholar, synopsis of the progress achieved by various social sciences.

This work and *Encyclopedia of social sciences* should be used together for certain kind of information.

This is a work must for all libraries except small ones like school libraries.

Linguistic survey of India, compiled and edited by G.A. Grierson, Calcutta, Superintendent, Govt. Printing Press, 1903-1928, 11

volumes divided into 19 parts.

This work surveys the vast field of Indian major languages and their innumerable dialects. For each language and main dialect of the Indian sub-continent, he has provided the name, habitat, number of speakers, history, family relationship, literature, bibliography, pronunciation and grammar. This is an important reference work useful for reference and research in Indian linguistics.

G.A. Grierson's *Linguistic survey of India; a summary*, by Siddheshwar Varma, Hoshiarpur, Vishveshvaranand Institute, Panjab University, 1972, 2 parts.

McGraw-Hill encyclopedia of science and technology, 4th ed., New York, McGraw-Hill, 1977, 15 volumes.

First issued in 1960, it has been continually revised. The fourth edition of this widely used science reference source is a revised and updated revision of the earlier editions of 1960, 1966 and 1971.

Editor in chief and consulting editors are well-known authorities. 2,700 scientists and engineers have contributed to the encyclopaedia, including a number of Nobel Prize winners.

It is basically a work of science and technology, not about it. Thus it does not cover articles of historical and biographical interest unless, required in the 'natural and factual development of technical subjects.' Thus historical and biographical references are rather brief if any. McGraw-Hill brings out two-volume companion set, *Modern men of science* for additional biographical information. There are about 7,800 articles including broad survey type articles and special short entries for specialized topics, varying from a few paragraphs to more than a dozen pages each.

The quality of writing is high. An article usually begins with a definition of the subject and then goes on to provide sufficient background information and further lead the reader into the more detailed body of the article. College undergraduates in science and engineering will be able to understand most of the articles or at least their introductory parts as articles have been written so as to be understandable to non-specialists.

The articles are signed by their contributors. The bibliographies to the literature are also given at the end of the majority of articles. This work is periodically revised and kept updated by the *McGraw-Hill yearbook of science and technology* which 'reports and analyzes the past year's significant developments and serves as a concise guide to ongoing scientific and technological activities.' There are large number of graphs and charts. There are a few full-page maps. However, numerous smaller maps are spread throughout the text in the

fields of geology, agriculture and meteorology.

The index volume contains two kinds of indexes, namely, analytical index and topical index. Analytical index contains 140,000 entries, indexing in depth the articles of the main text. These entries are arranged on word-by-word basis. The topical index groups 7,800 article titles into a hundred major subject areas of science and technology.

. There are a large number of subheadings given in bold type in each article. Cross references are given at the end of subheadings. There are 72 full-page colour plates, which are pleasing. The scientific illustrations are clear and well presented.

This work will appeal to above average layman, scientists, teachers, and students. It is easy to use for both research and ready reference questions, especially for brief definitions of terms. This encyclopaedia is recommended for libraries of all levels—school, college, university. and public, as it is the best general encyclopaedia in the field of science and technology. The cost is high enough, therefore many of the small libraries would not be able to afford it.

Van Nostrand's scientific encyclopedia, 5th ed., New York, Van Nostrand Reinhold, 1976.

Nearly 200 specialists have contributed to this edition covering a wide range of science and technology.

Contains over 2,000,000 words and over 7,200 editorial entries on earth and space science, energy technology, life sciences, materials sciences, mathematics and information science, physics and chemistry. The entries vary from short paragraphs to multipage articles.

It attempts to serve the needs of nonspecialists. Fundamental subjects have been introduced with a broad overview, whereas more complex, highly-specialized subjects essentially begin with detailed description.

It follows alphabetical arrangement by subject.

Many short entries have been consolidated to provide concentrated information in fewer locations. Large number of cross references have been provided. Cross-referenced items have been set in bold face type. A large number of visual aids have been given, including 2,500 photographs, drawings, and charts. There are over 550 tables. Selected list of reference material is added at the end of most major entries. Special emphasis has been given to recent progress in science and technology.

This is to be regarded as the most comprehensive single volumed encyclopaedia in the field of science and technology. The fifth edition is claimed to be a completely new work. It may be placed at refe-

rence librarian's desk. It gives brief, selective and up-to-date information. This is a highly useful work for scientists and above average laymen. It is strongly recommended for libraries.

Wealth of India: A dictionary of Indian raw materials and industrial products, New Delhi, Publications and Information Directorate, CSIR.

This is an encyclopaedic work dealing with the economic products and industrial resources of India. It has been issued in two series: Raw materials and Industrial products.

Raw materials series consists of 11 volumes and 2 supplements. In it "articles deal with animal products, dyes & Tans, essential oils, fats & oils, fibres & pulps, foods & fodders, drugs, minerals, spices & flavourings, and timbers and other forest products."

Industrial products series consists of 9 parts. It "includes articles giving a comprehensive account of various large. medium and small scale industries. Some of the major industries included are: Acids, carriages, diesel engines, fertilisers, insecticides & pesticides, iron & steel, paints & varnishes, petroleum refining, pharmaceuticals, plastics, ship and boat-building, rubber, silk, etc."

It provides mine of information, which should be useful to students, scientists and industrialists.

92 INFORMATION THAT MAY BE LOCATED
FROM ENCYCLOPAEDIAS

(i) Description of 'Wooden horse of Troy,'
 (ii) Oath of Hippocrates,
(iii) Number of President Kennedy among other Presidents of USA,
 (iv) Information about Mormons (a religious sect),
 (v) International date line,
 (vi) Importance of vitamin D,
(vii) Information about great depression of the United States,
(viii) Total number of items in the British Museum,
 (ix) Short description of radar,
 (x) Short biographies of the following:
    (a) Henry Ford,
    (b) Andrew D. Carnegie,
    (c) C. V. Raman,
    (d) John Dewey,
    (e) Rabindranath Tagore, and
    (f) John Gutenberg.

(xi) Name of the country producing the largest amount of petroleum in the Middle East,

(xii) Who was the first president of Royal Society, London,

(xiii) Who assassinated Abraham Lincoln,

(xiv) Where is Wall Street,

(xv) Who was the first to fly an aeroplane,

(xvi) What was the cause of the death of Lord Buddha,

(xvii) When did Fiji gain its independence,

(xviii) Name of the first president of USA,

(xix) What is the technical name of the fertilizer used for plants,

(xx) Properties of heavy water,

(xxi) Information on the development and discovery of business cycles,

(xxii) Who were the first to manufacture paper,

(xxiii) Name of the scientist, who invented television in 192..

(xxiv) Who was the first Governor General of Free India,

(xxv) Climate of California,

(xxvi) Can melons be grown in California,

(xxvii) How long is the day during summer at North Pole

(xxviii) Food taken by Eskimoes,

(xxix) Who invented radio,

(xxx) Summary of the work of Isaac Newton,

(xxxi) Short account of history of ancient India,

(xxxii) History of science during 18th century,

(xxxiii) Background information on the following:
    Television, yoga, child psychology, space science, second world war and human relations.

(xxxiv) Description of monuments in France.

93 CONCLUSION

As we have seen, encyclopaedias exist in great variety. These are produced keeping in view the level of audience. Multi-volumed sets provide detailed treatment to topics, on the other hand one or two volumed encyclopaedias give brief treatment to topics. Second category has certain advantages for ready reference service. A small library may prefer one or two volumed encyclopaedia due to cost factor. In case of a large library, leading general encylopaedias such as *Encyclopedia Americana, New encyclopaedia Britannica* and *Collier's encyclopedia* will be found indispensable. Usually, it will not be possible to purchase all the revised editions, therefore, their, purchase has to be alternated between these three from time to time.

However, if a set is a completely revised version, a preference must be for the same. As regards the subject encyclopaedias, a library will buy these depending upon the requirements of the users and availability of funds.

ALA Reference and Subscription Books Review Committee publishes reviews of reference books in *Booklist*. These are lengthy and well written reviews, indicating its recommendation about the item reviewed. It is suggested that Indian Library Association should provide such a service to Indian librarians. This is urgently needed. As reference books are costly to purchase, therefore, a librarian should examine these before purchasing a given reference book.

We find that newer methods of producing encyclopaedias including compilation of information, printing etc., are being employed. As a result, it is increasingly becoming possible to keep these up-to-date and bring these out promptly.

Even today, there is no encyclopaedia, which may be accepted as a truly international one. There is no likelihood for the same in the near future.

Nobody can predict about the future of encyclopaedias. One thing is sure that these will continue to play an important role in the recording of essential information and provide information, instruction and education to all those who want to benefit from these.

FURTHER READING

FRANCES NEEL CHENEY, *Fundamental reference sources*, Chicago, American Library Association, 1971, Ch. 5, pp. 289-292.

GIRJA KUMAR, "Britannica—an Indian View," *Sunday Standard* (New Delhi), October 10, 1975, p. 7.

DENIS GROGAN, *Science and technology; an introduction to the literature*, 3rd ed., London, Bingley, 1976, Ch. 3.

WILLIAM A. KATZ, *Introduction to reference work*, 3rd ed., vol. 1, New York, McGraw-Hill, 1978, Ch. 5.

KENNETH F. KISTER, *Encyclopedia buying guide*, 2nd ed., New York, Bowker, 1978.

HERMAN KOGAN, *Great EB: Story of the encyclopaedia Britannica*, Chicago, University of Chicago Press, 1958.

"The making of a general encyclopedia," *Booklist*, Sept. 15, 1976, pp. 206 214.

C.D. NEEDHAM, "Britannica revisited," *Library Association Record*, July 1975, pp. 153-168.

S. PADRAIG WALSH, *Anglo-American general encyclopedias*, 1703-1967, New York, Bowker, 1968.

52 YEARBOOKS, ALMANACS AND SUPPLEMENTS TO ENCYCLOPAEDIAS

YEARBOOKS, almanacs and supplements to encyclopaedias are ready reference sources. These are related sources of information. These complement as well as supplement encyclopaedias. For miscellaneous kind of information, these are next in importance to encyclopaedias themselves.

1 SCOPE

Yearbooks, almanacs and supplements to encyclopaedias usually contain the following kinds of information:

(*i*) Chronological list of the important events of the year,

(*ii*) Summaries of the political, social and cultural events of the year,

(*iii*) Major developments and trends in various fields including science and technology during the year,

(*iv*) Short biographies of notable living persons and also obituaries of leading personalities,

(*v*) Information about organizations,

(*vi*) Statistical information about different fields including about important sports' events, prizes, awards, population, etc;

(*vii*) In short, relatively brief current information on a subject or person or organization or event.

These sources of information may be used to find answers to following questions:

(*i*) Who won a Nobel Prize in physics last year?

(*ii*) What were the important developments in chemistry during last year?

(*iii*) Who won Wimbledon's single's final in 1976?

(*iv*) What were the trends in fashion in 1978?

(*v*) Which were the outstanding movies of 1976?

11 Yearbooks

According to ALA glossary, a yearbook is "an annual volume of

.current information in descriptive and/or statistical form, sometimes limited to a special field."[1] It is an annual compendium of current information. It aims to cover activities, which have taken place during a period of one year. Sometimes, it may be restricted by subject or country or region. Although a yearbook is likely to provide fairly recent information, yet in case of changes which might have taken place subsequent to its publication, one should examine publications called current reference sources (e.g. *Asian recorder*, *Keesing's contemporary archives*, etc).

Out of the large number of yearbooks, *Statesman's yearbook*, is the most popular yearbook. An Indian library must acquire *India: a reference annual* and *Times of India directory & yearbook including who's who* besides the above. In an average Indian library, these yearbooks taken along with a set of good encyclopaedia would be sufficient to deal with majority of queries.

12 Almanacs

In the beginning at about 1000 B.C. an almanac was *regarded as a book arranged chronologically covering information* concerning rising and setting of moon, periods of low and high tides, and a calendar of holidays along with some miscellaneous information. The almanacs have undergone many changes.

According to ALA glossary, an almanac is "(1) An Annual Publication containing a calendar, frequently accompanied by astronomical data and other information. (2) An annual yearbook of statistics and other information sometimes in a particular field."[2] The second definition seems to be more appropriate for present day almanacs. These tend to be compendium of useful factual and statistical information, retrospective as well as current one covering local, state, national and international affairs. These are frequently used as ready reference sources of statistics. Very often emphasis may be laid on the country of its publication.

These are cheap enough and cover much common ground. However, each has certain special features. These heavily derive from government sources for statistics. These mainly carry the same basic information from year to year but for updating and revision of information. Revision becomes necessary to keep the size within reasonable limit.

[1]*ALA glossary of library terms with a selection of terms in related fields*, Chicago, American Library Association, 1943, p. 150.

[2]*Ibid.*, p. 4.

Many of those used in libraries are American based and prepared to serve interests of American public. For Indian libraries, we may recommend *Whitaker's almanack* and *World almanac and book of facts*. The first one is of British origin and second is American based.

13 *Yearbooks* versus *Almanacs*

Yearbooks and almanacs are two different types of sources of information. Both are related ready sources of information in terms of their scope and use. We may go to the extent of saying that both are used almost for the same types of information.

Traditionally speaking, almanacs were considered general in scope and yearbooks were confined to a subject or a given area or region. But this distinction has broken down. For instance, supplement to an encyclopaedia, which appears as a yearbook would be general in scope.

A yearbook is a compendium of current information for the previous year. However, an almanac covers information of the previous year as well as considerable amount of retrospective materials, which may or may not find a place in a yearbook.

14 *Supplements to Encyclopaedias*

Supplements to encyclopaedias are annual or periodical publications, issued by publishers of encyclopaedias to supplement the information contained in the encyclopaedias. Thus these contain recent developments and events.

The basic aim of a supplement to an encyclopaedia is to keep the basic set up-to-date and to bring out a summary of the major events, which have taken place during the year. Very often, the second aim gets main attention. That is why, most of the supplements are related to the basic set merely in name. A complete set of a particular supplement can give comprehensive view of the events over a period of time. It is not necessary that all the information contained in supplements be incorporated in the revised edition of the encyclopaedia concerned. Therefore, the file of supplements may serve a useful purpose in a large library.

Due to the nature of information, supplements are extremely useful for determining the developments and trends in a particular field during the previous year. These also prove to be useful for fact-type questions relating to events, biographies, obituaries, current statistics, summaries of sports events, news pictures of the year, etc.

Due to the fact that these have to be compiled in a limited time,

they may happen to be less authoritative and also lack proper perspective.

2 IMPORTANCE

One can well imagine the importance of these kinds of publications from the fact that very often in a library, majority of the queries from users can be answered with the help of these works. This is especially true in public and school libraries. For questions involving recent trends and current developments, these sources of information are usually the first one to be consulted.

As the main purpose of an encyclopaedia is to record background knowledge on different subjects and topics, therefore, these cannot possibly provide up-to-date information on human activities and progress. However, the publications under consideration are prepared to serve such a need. These also greatly help encyclopaedias to be kept up-to-date by providing recent information. Thus these are supplement as well as complement to encyclopaedias.

3 CHECKLIST FOR EVALUATION

In order to make the best use of yearbooks, almanacs, and supplements to encyclopaedias, it is essential to acquire a thorough understanding of these. This can be achieved to a large extent by evaluating these on the basis of laid down criteria. The checklist for evaluation of these publications should consist of authority, scope, arrangement, up-to-dateness, special features, drawbacks, format, and conclusion.

31 Authority
The work should be authoritative. In other words, it should be accurate and reliable. The authoritativeness of these works can be usually judged on the basis of the reputation of the publisher, editor(s), compiler(s).

32 Scope
The scope of the work would depend upon the purpose of the work. It would have limitations with regard to its scope. The kind of information provided would depend upon the scope of the work. It may be a general one or restricted to a specific subject or area. The year of coverage of information is an important consideration, which is usually indicated in the title. Usually, if the information is for

1976, then title may contain year 1977.

33 *Arrangement*

The work will be considered useless unless the information can be located easily and quickly. Usually these works are arranged in a systematic order. In order to facilitate search for information, it is essential to have a detailed index. The index should be well prepared and provide for various kinds of approaches.

34 *Up-to-Dateness*

These should be revised every year so that these are kept up-to-date. A yearbook would contain current information for the previous year but an almanac may also include considerable amount of retrospective information.

35 *Special Features*

The publication may contain certain information not easily available elsewhere. It may have laid special emphasis on information relating to a specific subject, area, organization. It may contain a great deal of information often found in biographical dictionaries, directories, geographical sources. The publication may contain a selected list of readings.

One should try to find out as to whether the work is the only one of its kind or unique in certain respects. This can be ascertained by comparing it with other works.

In order to determine the reliability, one should select few items from factual information and statistics and check these with authoritative sources of information.

Reading of preface and introduction, and examination of information given in the work can give an idea about special features of the work.

36 *Drawbacks*

The publication may lay too much of emphasis on certain areas to the neglect of some important aspects. There may be too much of time lag. It may be too expensive, thus placing it out of the reach of small or medium-sized libraries.

37 *Format*

One should try to determine, whether headings and subheadings are bold enough to stand out clearly. The type faces should be clear and legible. The binding should be strong enough to withstand heavy

wear and tear.

38 Conclusion

Conclusion should include overall judgment about the reference book. Indicate whether the work is to be recommended for a library or not. If so, then one should specify the kind of a library.

4 SELECTED EXAMPLES

41 Yearbooks

Bowker annual of library and book trade information, edition 1-, 1956-, New York, Bowker, 1956-, annual.

R. R. Bowker is a name to contend with in the world of bibliographic publications.

Bowker annual serves as an almanac, a handbook, a directory, a factfinder etc. It provides statistics regarding libraries and book trade. The other features cover calendar of book trade and promotional events, library standards, pertinent legislation, grants, library prizes and awards, recent publications in the field, basic books for librarians and the book trade, library education, and a directory of state, regional and international associations. It also provides a list of selected US libraries, giving addresses and their telephone numbers.

It gives brief account of the previous year through articles and statistics for USA. It also provides state of library service in countries other than the United States by gathering reports from several foreign countries. In the 21st edition published in 1976, reports on library development in Canada, Great Britain, Norway, South Korea, and the People's Republic of China have been included.

A major feature of 1976 volume is the cumulative index of all the major articles and subjects covered in the *Bowker Annual* from 1972 to 1976.

Bowker annual is an excellent source for library and trade statistics. This is a useful work, describing the activities of organizations in the fields of library and book trade, mainly covering USA. There is a need for such a work to provide similar information about India

Demographic yearbook, 1948-, New York, United Nations, 1949-, annual.

This yearbook provides official demographic statistics from almost 250 geographical entities of world. In addition, United Nations estimates of total population are given, in case official estimates are

lacking.

It also provides vital statistics, expectation of life, population by urban/rural residence, by major civil division, in localities by size-class, and in capital cities and cities of 100,000 and more inhabitants. Population by number, size and characteristics of households is included and also by the following personal characteristics: sex, age, marital status, country of birth, country of citizenship, ethnic composition, language, religion, literacy, educational attainment, school attendance and female population by number of children born alive and number of children living. Technical notes on the statistical tables and a cumulative index provides information as to the subject-matter and time coverage of the earlier volumes.

This is a highly useful work for demographic data.

Europa yearbook, 1959-, London, Europa, 1959-, 2 vols, annual.

Europa Publications is a leading publisher of yearbooks. Out of these the present one is a general yearbook.

First part of first volume covers international organizations, arranged alphabetically. This part gives detailed information about the UN and other leading international organizations. Besides, it describes functions, membership, address and the date of foundation for lesser known international organizations. Second part of first volume deals with countries of Europe (including USSR and Turkey) in the alphabetical order. The index to volume one lists international organizations. Volume two describes rest of the countries, listing each alphabetically within each region. The index to volume two lists alphabetically all countries of the world.

This work provides a great deal of information about every country including recent history, economic and statistical surveys, details of the constitution, government, diplomatic representatives, political parties, legal system, religions, social welfare, education and defence. For each country, there is also a directory section giving the names, addresses and other useful facts about newspapers and periodicals, publishers, radio and television, banks, insurance, chambers of commerce, trade associations and trade unions, ai nes, railway and shipping organization, and universities. Statistics data in many cases is given for a number of years, which facilitates comparison of figures.

It may be mentioned that *Statesman's year book*, quite often provides more extensive information on different countries of the world. Similarly *World of learning* provides far more information on universities.

This work provides fairly up-to-date nformation. This is an

excellent source for names and addresses of international organizations. This also serves as a good source for brief descriptive and statistical information on different countries of the world. This yearbook is recommended for various types of libraries.

India; a reference annual, 1953-, New Delhi, Publications Division, Ministry of Information and Broadcasting, Government of India, 1953-, annual.

The twenty-fourth edition was published in 1978. This yearbook contains information on major services of the Indian government including the states as well as various important activities taking place in the country. This annual contains information on diverse aspects of Indian national life, covering land and the people, national symbols, government, defence, education, cultural activities, scientific research, health, social welfare, mass communication, economic structure, finance, planning, agriculture, rural development, civil supplies and cooperation, energy, industry, commerce, transport, communications, labour, housing, laws of parliament, states and union territories, important events. Besides, there are a number of appendices covering personnel of the government, members of parliament, awards given by different organizations (who was given which award), universities in India, foreign diplomatic representatives in India and India's representatives abroad.

The twenty-fourth edition contains a special article entitled, 'year of change'. For each state and union territory, it provides information concerning area, capital, population, principal languages, agriculture, industry, irrigation and power, government. Similar information is also available for India as a whole. It lists important Indian events in a chronological order. A long bibliography has been provided, which should serve as a useful guide for further reading. A detailed index has been given at the end.

It is of Indian origin and is limited to India only. Being government publication, the information and statistics are official. This is an authoritative work, which is a must for Indian libraries.

INFA, 1973: press and advertisers yearbook, 11th ed., New Delhi, INFA, 1973.

Part I deals with press-general, information services, who's who in Indian press. Part II covers media planning and Part III includes rates and data. It is a rich source of information about Indian press and advertising. Plenty of tables to provide data have been given. It provides a list of important events at national (India) and international levels. It also gives a useful list of Indian newspapers and periodicals along with brief details.

Statesman's yearbook, 1865-, London, MacMillan, 1864-, annual.

First published in 1864 and 115th edition was published in 1978. MacMillan Press is a leading Publisher with high reputation.

This is a statistical and historical annual of the states of the world. Comparative statistical tables have been provided in the beginning. The tables are followed by main portion of the work divided into four parts. Part I International organizations; Part II The Commonwealth; Part III The United States of America; Part IV (Other countries). Part IV is followed by a detailed index.

Part I gives information about the United Nations, agencies related to the UN, World Council of Churches, International Trade Unionism, European Organizations like OECD, NATO etc. Other international organizations covered include Colombo Plan, SEATO, CENTO, Arab League, Organization of African Unity, etc. Information is usually provided about origin, functions, organization, headquarters, President, Secretary and publications, etc.

For each country and political unit usually information is given about constitution and government, area and population, religion, education, health, justice, finance, defence, planning, agriculture, forestry, industry, oil, commerce, shipping, railways, roads, aviation, post, banking, weights and measures, diplomatic representatives, books of reference. As this yearbook is not an almanac, therefore there is general absence of astronomical data.

A map showing world population trends, with percentage increase, and comparative 10-year growth by major regions has been provided.

A useful list of books of reference is given at the end of each item. Comparative statistical tables have been provided. A detailed index has been given at the end, which is arranged alphabetically by place, name, and subject. Names of people are excluded.

This is a work of British origin, which lays emphasis on providing information about British Commonwealth. Special attention has been paid to Great Britain and USA.

This is a highly useful, most popular and comprehensive general yearbook containing concise, accurate and up-to-date descriptive and statistical information about the governments of different countries of the world. This yearbook is a must for all types of libraries.

Times of India directory and year book including who's who 1914-, Bombay, Times of India Press, 1914-, annual.

This publication has a long history. First it was published under the title *Indian yearbook.* Later its title was changed to *Indian and Pakistan yearbook and who's who.* The present title was adopted from 1954/55 edition onwards.

This is a trade directory, year book and a biographical dictionary combined in one. The information is confined to India only. The topics covered include trade directory for buyers, the country, nature and resources, agro-based industries, education and science, welfare programmes, demography, general compendium, trade and industry, finance, communications, states and union territories, administrative and diplomatic personnel, elections and legislatures, who's who, maps of India, states and the world.

A great deal of information, which is not easily available elsewhere, has been provided. It provides list of commercial firms arranged itemwise. Lists of research organizations, names of Government of India and state administrative personnel, names of Indian diplomatic representatives abroad, foreign diplomatic representatives in India have also been given. Who's who in India forms a useful part. The index is quite detailed.

Contains a great deal of descriptive and statistical information on India. It is a must for Indian libraries.

Yearbook of the United Nations, 1946/47-. New York, United Nations, Office of Public Information, 1947-, annual.

This yearbook provides comprehensive record of the yearly activities of the United Nations and its related agencies. It is divided into two sections. The first one covers political, economic, social and security questions before the United Nations for a particular year. The second one deals with inter-governmental organizations related to the United Nations. Various appendices, index (name and subject entries) serves a useful purpose. Documentary references given at the end of each chapter serve a useful purpose.

The publication programme of this publication is usually late by two or three years; volume for 1973 was published in 1976. Therefore, for current information, one should use publications like *Statesman's yearbook*, *Europa yearbook*, etc.

The different volumes published so far give an excellent summary of the activities of United Nations and related agencies.

This is an invaluable publication for those who are interested in the activities of the United Nations. The work maintains high standard of accuracy and objectivity.

42 Almanacs

Whitaker's almanack 1869-, London, Whitaker, 1869-, annual.

Joseph Whitaker was the founder, who established it in 1868. The authority behind *Whitaker's almanack* is recognized universally, well-known for accuracy of information.

This covers, "an account of the astronomical and other phenomena and a vast amount of information respecting the government, finances, population, commerce, and general statistics of the various nations of the world." However, primarily it is a record of recent events and information has been provided in the form of a general compendia.

Although, it is called an almanac yet the calendar material forms only a small part of it.

It has an excellent index covering some 20,000 entries. Events of the year are listed chronologically. It provides greater emphasis on British Commonwealth with special reference to Great Britain. It is especially useful about British institutions, British Royal Family, peerage, baronetage and knightage. A shorter edition is also available, which could be useful for small libraries.

There is no doubt that *Whitaker's almanack* contains vast amount of information in a single volume. The facts provided are accurate and up-to-date. It is highly useful for getting facts about different aspects of British life.

World almanac, and book of facts, 1868-, New York, Newspaper Enterprise Association, 1868-, annual.

Contains brief factual information and statistical data on social, political, industrial, financial, educational, cultural and other subjects. Information has been provided on astronomical and meteorological events, museums, art galleries, historic places, disasters, earthquakes, sports events.

For USA information and statistics for each state has been given, covering population by state and country. For other countries, population of major cities has been provided. Short biographies of US presidents and their wives are included. Names of cabinet officers of the US government from 1789 have been listed. List of signers of the Declaration of Independence is given.

A very useful index has been given in the beginning listing entries under subject, occupation and profession. In case of some famous men, author entries have been provided in the index.

Most of the information is related to the United States but small sections have been devoted to history and present conditions in different countries of the world.

It is the most comprehensive of all almanacs of miscellaneous information published in the United States. It lays greater emphasis on providing more information about America. It contains up-to-date and reliable information. This work is highly recommended.

43 Supplements to Encyclopaedias

Britannica book of the year, 1938-, Chicago, Encyclopaedia Britannica, 1938-, annual.

This is a highly authoritative work, as it is broughtout by the publisher of *New Encyclopaedia Britannica*. The contributors are all authorities in their field.

Annual volumes of this work serve as supplement to the parent work entitled *New Encyclopaedia Britannica*. It updates the *Britannica* and also points out to the more extensive treatment given in *Britannica* by means of a code. Thus there is a close relationship between *Britannica book of the year* and the parent work.

The yearbook provides coverage of people, places and events of prominence during the past calendar year and reviews the developments in subject areas of wide interest. The emphasis is on giving a summary of the year's major events at national and international levels.

1976 Britannica book of the year was published in 1976. It contains the following information:

(*a*) Feature articles.

(*b*) People of the year. Biography, nobel prizes, obituaries.

(*c*) Chronology of events. A month by month summary account of significant happenings that have occurred in 1975.

(*d*) Book of the year. An alphabetical organised treatment of the people, places, and developments of significance during 1975, including general areas like economic developments, environment and natural resources, food and agriculture, health ard disease, human affairs, industrial reviews, literature and the arts, national and international affairs, science and technology, social sciences, sports and games. This portion also contains 16 special reports intercepted throughout.

(*e*) Contributors. List of contributors along with the title(s) of the articles written by them.

(*f*) Index. Detailed index.

The date in the title indicates the date of publication and contains the information about events of the previous year.

Each item is signed so that indicating the authoritativeness of information. There is great emphasis on providing statistical data of all types. Major events of the past year are listed day by day. Biographies of prominent figures, who dominated the news in the previous year are given. The special reports on various topics serve a very useful purpose.

This yearbook has been planned to serve as a source for ready

reference. This should be used along with the main work. There is no doubt that *Britannica book of the year* is regarded as the best work of its kind.

Americana annual, 1923-, New York, Grolier, 1923-, annual.

The contributors who have written the summaries are all authorities in their own fields. The publisher is also equally well known.

This is an annual record of progress and events, which serves as annual supplement to the *Encyclopedia Americana* (The *Americana annual, 1978* published in 1978, records events for 1977). It aims to review significant political, social, economic, scientific and cultural developments of the preceding year.

Contains signed survey articles, large number of biographies and necrology list. There is a detailed index given at the end. *Americana annual* is a significant work.

McGraw-Hill yearbook of science and technology, New York, Mc-Graw-Hill, 1961-.

The staff, consultants and contributors are experts in their respective fields.

The yearbook for 1978 (published in 1978) reports and analyses the significant developments of 1977 and also serves as a guide to ongoing activities in the field of science and technology. This yearbook aims to bring selected subjects in the *McGraw-Hill encyclopedia of science and technology* completely up-to-date. Thus it serves as a supplement to the basic information provided in the *encyclopedia* and keeps the fourth edition (1977) of the same current.

The 1976 yearbook includes "feature articles on subjects of special interest and timeliness, photographic high-lights, and a comprehensive alphabetical review of the past year." The seven subjects discussed in the feature articles claimed to be chosen for their broad interest and significance are: Behaviour modification, cryobiology, genetic engineering, nuclear reactor safety, ozone in the atmosphere, permafrost and Van der Waals forces. The photographic highlights section reproduces photos, which were considered to be outstanding from scientific as well as artistic point of view during the past 12 months. Alphabetical review of scientific and technological developments in 1975 contains 137 articles, covering approximately 240,000 words. These discuss advances, [discoveries, and developments during the past year. There are 320 illustrations including diagrams, maps, halftones and line drawings.

Articles have bibliographies appended to them. There is also an excellent analytical index at the end containing about 4500 entries.

This yearbook serves as a ready reference to the progress in science

and technology. This will be found extremely useful by students and teachers of science; engineers and scientists.

5 INFORMATION THAT MAY BE LOCATED IN YEARBOOKS, ALMANACS AND SUPPLEMENTS TO ENCYCLOPAEDIAS

(*i*) (*a*) Important Indian events of 1975-76, and (*b*) important events of the world which happened during 1978,

(*ii*) Address of Advertising Manager, Times of India,

(*iii*) (*a*) Book production for 1974 and (*b*) number of books publi-shed in political science in 1974 in India,

(*iv*) Number of cinemas in Delhi and their seating capa. ty,

(*v*) Length of Indian border adjoining its neighbouring countries,

(*vi*) List of book clubs in UK,

(*vii*) How many languages and dialects are spoken in India,

(*viii*) Who elects the President of India and his powers,

(*ix*) Percentage of illiterates in Indonesia in 1971,

(*x*) How many states were merged in 1947 with India and Pakistan respectively,

(*xi*) National bird of India,

(*xii*) Outline of the constitutions of USA and USSR,

(*xiii*) Difference between UN and UNO,

(*xiv*) Complete list of Noble Prize winners in medicine,

(*xv*) Who won Davis Cup in 1978,

(*xvi*) Names of outstanding movies of the past year,

(*xvii*) Salaries of the Prime Minister of UK and President of USA,

(*xviii*) Names of Indians, who have won a Nobel Prize,

(*xix*) Names of currencies used in West Germany, Italy and Peru,

(*xx*) Names of commonwealth countries,

(*xxi*) Names of national laboratories in India,

(*xxii*) Length of river Nile,

(*xxiii*) Height of Mount Everest,

(*xxiv*) Amount of Wheat produced in Andhra Pradesh,

(*xxv*) Names of seven wonders of the world,

(*xxvi*) Total amount of money given as award to a Nobel Prize winner,

(*xxvii*) Longest river of the world,

(*xxviii*) Highest dam in the world,

(*xxix*) Major items of export from India,

(*xxx*) Capital of Nova-Scotia,

(*xxxi*) Fastest train in the world and its speed,

(*xxxii*) Names of countries, which are the members of UNO,

(*xxxiii*) City of largest population,

(*xxxiv*) Pension paid to the President of India,

(*xxxv*) National Anthem of India,

(*xxxvi*) Average rainfall in Delhi,

(*xxxvii*) Number of radio stations in India,

(*xxxviii*) Brief account about the activities of UNESCO,

(*xxxix*) Location of major steel plants in India.

(*xl*) Total number of post offices in India,

(*xli*) Functions of ILO,

(*xlii*) The official language of Denmark,

(*xliii*) Recent developments in physics.

6 CONCLUSION

These publications should be used along with encyclopaedias. Encyclopaedias are not able to cover current developments and trends. As such publications containing summaries of recent information produced annually are needed to supplement sources of information covering background sources. However, they are less authoritative than encyclopaedias due to range of facts provided. A great advantage of these is that these are easy to handle and information is arranged in such a manner that it can be easily located unlike encyclopaedias. These are also much cheaper so that many of the libraries can afford to purchase these.

The supplements emphasize trends and developments but almanacs and yearbooks lay more stress on specific facts. All of the publications are well organized for reference and contain a great deal of information in a compact form. Their indexes are usually very detailed.

FURTHER READING

AMERICAN LIBRARY ASSOCIATION, REFERENCE AND SUBSCRIPTION REVIEW COMMITTEE, "Encyclopedia supplements," *Booklist*, 68 (no. 7), 1971, pp. 297-99.

DENIS GROGAN, *Science and technology; an introduction to the literature*, 3rd ed., London, Bingley, 1976, Ch. 6.

WILLIAM A. KATZ, *Introduction to reference work*, 3rd ed., Vol. 1, New York, McGraw-Hill, 1978, pp. 164-165, 187-203.

13 BIOGRAPHICAL SOURCES

0 INTRODUCTION

A biography is defined as written life of a person. People in general have a great interest in the lives of great men as well as others who are notable in some way. Biography is one of the most popular field of study providing information, inspiration and entertainment. Questions relating to biographical information occur in all types and sizes of libraries.

1 SCOPE

Biographical sources of information form important sources of information. These tell us about the dates of birth and death, qualifications, the positions held, the contributions made and the address of the biographee. The amount and kind of information varies from one biographical source to another. On one extreme, we may have bare listing of a few essential facts and the other extreme may be a long interpretative essay.

Biographical sources are ready reference sources. These provide basic facts about an individual. Usually, these provide answers to the following questions:

What has been written by a particular author? From where he got his education? Which positions have been held by him? What is his full name? Where was he born? What is his address? Some of these sources also provide portraits or photographs, which have an added value. Very often indexes are appended, which help one to know about leading figures in a particular field or occupation. As mentioned earlier, some of the sources provide long essays on each biographee covered. With the result, such sources can be extremely useful for one, who wants to write an article or a speech or requires detailed information about a person. Of course, these would also provide basic facts about each individual covered.

2 CATEGORIES OF SOURCES FOR BIOGRAPHICAL INFORMATION

The biographical information can be obtained from the following sources of information:

Almanacs, biographical dictionaries, dictionaries, directories, encyclopaedias, literary handbooks and manuals, obituary columns of newspapers, etc., (of course full length biographies in single volumes, history books, books of essays or criticism, etc., are additional sources). Periodical and newspaper indexes are also valuable sources.

Out of above sources, biographical dictionaries is the most important single source of biographical information. In this chapter, we shall be primarily concerned with this category of reference books. A biographical dictionary lists and identifies notable persons giving significant data about each. It is exclusively devoted to biographical information. It usually follows alphabetical arrangement. Different kinds of biographical dictionaries vary a great deal. Some provide only bare minimum facts and others may devote a few pages to each biography. They may give a descriptive or critical or evaluative account. Occasionally, a list of further reading may be added. Various kinds of indexes can also be appended.

Many of the almanacs include brief biographical entries providing sufficient information for identification of the person concerned. The same can be said about dictionaries. Telephone directories, occupational directories, etc., provide brief information consisting of full name, address, designation of the individual. These are extremely handy. Encyclopaedias are useful sources, especially for notables, who are no longer alive. However, yearbooks to encyclopaedias should be used for living persons as well as those, who have died during the past year. In case of notable persons, who have also done some writing work, literary handbooks and manuals can serve a useful purpose. Periodical and newspaper indexes are valuable sources for searching current profiles. These can lead one to obituary columns of newspapers and other useful references.

3 EVALUATION

In order to make the best use of biographical sources, it is essential to acquire a thorough understanding of them. This can be achieved to a large extent by evaluating these, and laying down criteria for their evaluation. The checklist for the evaluation of a biographical dictionary should consist of authority, scope, method of compilation,

treatment, arrangement, items of information, indexes and cross references, revision and updating, format, special features and conclusion.

31 Authority

The work should be an authoritative one. The authoritativeness of a biographical dictionary can usually be judged on the basis of the reputation of the publisher, editor(s) and compiler(s). In this regard, it is useful to know the qualifications and experience of the compiler(s) and editor(s). The authoritativeness of the work will also depend upon the method of compilation of information.

32 Scope

The scope can be understood by finding answers to the following questions:

What are the limitations with regard to area of coverage? (Is it international or national or local in scope?)

Is it restricted to a subject or profession?

Is it comprehensive or selective? What is the criterion for selection?

Is it current or retrospective?

33 Method of Compilation

What is the criterion for the selection of biographees included? Has the criterion been stated clearly in the introduction or preface? Has it been applied consistently? Usually the selection is based on some type of outstanding achievement or eminence. But it is very difficult to apply such a criteria.

How the information about each biographee was compiled? Has it been supplied by the biographees themselves or prepared by the compiler(s) from published (primary or secondary sources) and unpublished sources. Biographical sketches based on historical research are to be considered authoritative.

34 Treatment

Are the biographical sketches merely factual or evaluative?

What is the average length of a sketch? Is it a brief outline or a long essay?

The answers to above questions would partially depend upon purpose and scope of the work. However, the length devoted to a biography may depend upon the importance of the person concerned. But in some works due to lack of space or proper perspective even very important persons may not get enough space proportionate to

their importance.

35 *Arrangement*

Is the arrangement alphabetical by author, subject or by geographical area or dates (date of birth or death)?

36 *Items of Information*

What are the items of information provided about each biographee? The items may include full name, dates of birth and death (if not alive), academic and professional qualifications, positions held, publications contributed, etc.

37 *Indexes and Cross References*

Is the work adequately indexed? Indexes to main sequence may be provided to satisfy other approaches.

Are there sufficient number of cross references?

38 *Revision and Updating*

In case a given biographical dictionary is to be kept up-to-date, it must be revised periodically. That is a current biographical dictionary should be issued at intervals and biographical sketches revised to keep the work up-to-date.

391 *Format*

Are the headings and subheadings bold enough to stand out clearly?

Are the typefaces clear and legible?

Has a suitable difference been made between different types of headings or not?

392 *Special Features*

One should find out whether the work is the only one of its kind, or unique in some way? What, for instance, is its distinctiveness? This can be done by comparing it with other biographical dictionaries of the same category.

How reliable is the work? For this a few items may be checked for accuracy. The information provided may be compared with an authoritative source.

The reading of the preface and introduction will give an idea about the special features.

The special features may include provision of photographs of biographees, provision of references leading to further information.

393 Conclusion

Is the work to be recommended? If so, the kind of the library should be mentioned.

4 CHARACTERISTICS OF BIOGRAPHICAL SOURCES

In order to get biographical information promptly, one should become familiar with biograpical sources of information. This requires knowledge of their nature and proper understanding of their characteristics.

Some of the characteristics are mentioned below:

(*i*) An international biographical dictionary is usually biased towards the country where published. Thus it may usually lay more emphasis on covering nationals of the country in which it is published.

(*ii*) A national 'biographical dictionary is likely to cover more nationals and provide more information about them than an international dictionary.

(*iii*) A special biographical dictionary is likely to provide more information than a general source.

(*iv*) Books on state or district or local history usually provide more information about prominent persons than national biographical dictionaries. Also these are more likely to cover less prominent persons.

(*v*) Newspaper and periodical indexes are excellent sources for obituaries, significant achievements, opinions and views held about notable persons.

(*vi*) Encyclopaedias are excellent sources for biographical information on persons no longer alive . But for contemporaries, these are not as good as biographical dictionaries.

(*vii*) It is usually more difficult to locate the biography of a non-writer than a writer.

(*viii*) Well edited biographical source may provide descriptive as well as evaluative account.

(*ix*) A biographical source published at a given time is apt to represent the opinions held at that time. This may influence the selection of a biographee and the amount of information devoted to him.

5 STRATEGY FOR FINDING BIOGRAPHICAL INFORMATION

(*i*) Before proceeding to search for information in biographical sources, find out the answers to the questions given on the next page.

(*a*) To which country does the person belong?

(*b*) Is he alive or dead?

(*c*) Was he an international or national or a local figure?

(*d*) How much information is required? Is the requirement for bare facts or detailed information and evaluation?

(*ii*) On the basis of answers to questions in (*i*), proceed as below:

(*a*) If the nationality is known, then consult the national biographical sources. In case, the nationality is unknown, consult international biographical sources.

(*b*) In case, it is known that the person is not alive, then a retrospective source must be consulted first otherwise consult a current source first.

(*c*) In case, the profession of a person is known, then first preference should be given to biographical sources for his profession.

(*iii*) Keep in view the following points:

(*a*) Universal biographical dictionaries of nineteenth century should be used carefully because these show a bias of the period concerned relating to choice and treatment of biographees. These should be used along with recent sources because recent sources might have corrected errors or wrong views.

(*b*) In order to verify a bibliographical data, it is better to compare a number of sources. It may be remembered that if the same fact is repeated in a number of places, it necessarily does not become accurate.

(*c*) As pointed out earlier, we can use a variety of sources to search biographical information. However, [in case brief and general information about the life of a notable person is required, our first preference should be for a biographical dictionary. A biographical dictionary is the most likely source for such information. Due to the very nature of a biographical dictionary, this kind of information is easier to locate.

6 GROUPING

The number of biographical dictionaries is extremely large, therefore, we shall evaluate here the most significant ones as well as those used widely.

For our convenience, we may divide biographical dictionaries into the following groups:

(*a*) Indexes to biographies,

(*b*) International sources,

(*c*) National sources: India, Great Britain and United States of

America.

(*d*) Professional and subject sources.

7 INDEXES TO BIOGRAPHIES

The demand for biographical information as well as publication of large number of biographical dictionaries has led to publication of indexes to biographies. Often, these serve as a starting point for one looking for biographical information.

A few examples of biographical indexes are described below:

Biography indexes; a cumulative index to biographical material in books and magazines, New York, Wilson, 1947-, vol. 1-, quarterly (bound annual and permanent three year cumulations are also available).

This is a index to biographical material appearing in approximately 2,200 periodicals; current books of individual and collective biography in the English language, obituaries, including those of national interest published in the *New York Times*; and incidental biographical material in otherwise non-biographical books.

Bibliographies, portraits and other illustrations are noted in it when these appear in the context of material being indexed. Juvenile literature is indicated by a symbol "a pyramid" and works of collective biography are marked by a star.

This work consists of main or "name" alphabet and index by professions and occupations. The *Biography index* also includes a checklist of the composite books, which have been analysed. Main or "name" alphabet gives for each biography, as far as possible, full name, dates, nationality, occupation with index references.

Biography index is primarily meant for those who want to do an in-depth study on an individual or one who may be in search of a controversial opinion about a person, which cannot be found in usual type of biographical sources of information. To a librarian, it can serve as a checklist for book selection and compilation of bibliographies. In addition, it is a basic reference work, which aids a librarian to locate biographical material not easily available in standard biographical dictionaries or encyclopaedias especially if the search is for recent biographical material.

New York Times obituaries index, 1858-1968, New York, New York Times, 1970.

The index lists more than 350,000 names including every prominent world personality who died during the period covered by the index. Many of the names are those which are not found easily elsewhere.

Citation is to date, page, and column of *New York Times*, where original news story can be found. In order to make the best use of this index, the library should have a complete file of *New York Times*.

Index to the Times of India, Bombay, 1973-, Bombay, Microfilm and Index Service, Reference Department, Times of India, 1974-, three times a year.

This is a index to *Times of India* (Bombay city edition), a leading Indian newspaper. Under the name of the author, one can locate articles, profiles, obituaries, editorials, etc., which can lead to useful biographical information. There is time gap of over two years, which need to be bridged.

Indian press index, Delhi, Delhi Library Association, 1968-, monthly.

IPI is a monthly journal of the Delhi Library Association, which covers 25 daily English newspapers of India and indexes all signed or unsigned articles, special write-ups (like profiles, obituaries etc), editorials, letters to editors, etc. An author index is provided in each monthly issue. The author index is cumulated every six months. The author index helps in locating articles, profiles, obituaries, which can provide useful bibliographical information. There is a considerable time-lag, which reduces its usefulness.

8 INTERNATIONAL BIOGRAPHICAL SOURCES

Current biography, 1940-, New York, Wilson, 1940-(monthly except August) monthly issues are cumulated into *Current biography yearbook*)

Current biography published monthly contains articles on important contemporary personalities in all fields. Many of the personalities are the ones, who became prominent only recently and information regarding them would be rather difficult to locate in other sources. The aim is to describe the lives and lifestyles including early struggles and recent achievements of prominent persons.

All biographies are feature-length. The heading of each article includes full name of the individual (the pronunciation of the name, if it is unusual), date of birth, occupation and address. This is followed by information about life and works of the biography covering specific details of the person's career, critical evaluation of an artist's work, his views, attitudes and opinions. At the end of each article are given the further sources of biographical information. A recent portrait is provided for each biographee.

The sketches are prepared by a specialist staff including skilled researchers, writers and editors. They collect information from other biographical sources (newspapers, magazines, books, etc.,) and often from the individual being covered through questionnaires. The biographees themselves are given opportunity to examine the article before it is published. The references to sources used for information are cited within the article. The articles are long enough to include all significant information regarding the life and works of the persons in the news. Usually the articles are relatively objective and also readable.

Each monthly issue contains about 16 biographies. Each issue gives a list of subjects classified according to their profession, a necrology of persons who had been included in *Current biography* at one time or the other when they were alive. A cumulated index to the issues of the current year is also brought out.

The monthly issues are cumulated and biographies revised (if necessary). These are brought out as *Current biography yearbook*. Before a biographical sketch is published, it is sent to the biographee for correction of factual errors. Each *yearbook* includes about 180 articles, a necrology for the year and an index by profession. A cumulated index to all issues of *Current biography* covering period from 1940 to 1970 has also been published. *Current biography cumulated index 1940-1970* is a one-volume index. The entry in the index is by name (cross references from variant forms of names are also provided) and refers to the issue and the year during which the biography was published. Additional references for necrology as well for updated sketches are also provided.

Current biography is a valuable source of biographical information. It often saves in searching other sources because it is quicker to include information. An additional advantage of this work is the emphasis on objectivity but not on sensational account. Above all, it is an extremely popular current source for essay type biographical information. However, it may be added that American artists, film stars, scientists, and writers, etc., are covered more fully than those from other countries because emphasis is on those who have influenced American scene in one way or the other.

International who's who, London, Europa, 1935-, annual.

This source of biographical information is broad in scope covering almost every outstanding international personality of our time ranging from arts to science. However, it is biased to English people.

Brief biographical sketches running into few lines are provided. The sketches include date of birth, nationality, education, profession,

career, present position, honours, awards and present address. In some cases, literary works (if applicable), leisure interests and often, a phone number are also added. The information included is provided either by the biographee himself or by various agencies such as associations, embassies and other bodies. The treatment is uneven.

In the beginning of the work, a list of most of the reigning monarchs and of certain other members of the reigning royal families, along with brief information is provided. This is followed by an obituary list of persons whose deaths have taken place since the preparation of the previous edition.

This work includes biographies of persons from over 120 countries. It supplements national biographical dictionaries. It is a handy work, which brings together information about current international personalities at one place. The great advantage being that as far as possible the biographies are brought up-to-date and revised to cover the latest available information. A valuable source for persons from countries, which do not have a national biographical dictionary of "who's who" type. But a national biographical dictionary for a country should be preferred for a biography, if relevant one is available.

International yearbook and statesmen's who's who, London, Burke's Peerage, 1953-, annual.

This devotes a major portion to biographical information. It contains 10,000 or so biographies of important persons. The emphasis is on leaders in education, finance and business. For each biographee information is provided about date of birth, education, profession, publications, and address, etc. It includes many names, which are not to be found in *International who's who*. This is certainly a useful work.

Webster's biographical dictionary, rev. ed., Springfield. Massachusetts, G & C Merriam, 1972.

This biographical dictionary contains biographical sketches of 40,000 noteworthy persons from all periods of time and different countries of the world. It covers both living and dead. However, Americans predominate, there are few Englishmen and even fewer persons from rest of the world. This is because the work is primarily meant for English-speaking world. About one third of the total entries relate to those who are still living.

Most of the entries are short. For each person, it provides pronunciation and syllabication of name, dates, nationality, city of residence, designation (profession or occupation), city of birth, family relationships, education, career, other significant achievements such

as inventions, publications, etc.

Pronouncing list of prenames and a number of useful tables l ave been provided (e.g. List of Presidents of USA, Vice-Presidents, justices of US Supreme Court, Popes of Rome, Roman emperors, etc).

This is a valuable source for biographical information giving bare minimum details. However, its basic weakness lies in the fact that biographical sketches have not been thoroughly revised since 1942. This should be the first work to be consulted, if one does not know anything about the person except his name. This is very good for identifying dates, nationality and general field of the person concerned.

91 NATIONAL BIOGRAPHICAL SOURCES

911 India

Dictionary of national biography, edited by S.P. Sen, Calcutta, Institute of Historical Studies, 1972-1974, 4 volumes.

32 Research Fellows collected the materials and nearly 350 contributors have written the biographical sketches. The contributors are well-known scholars in their field.

It aims to cover "people from all walks of life—politics, religious and social reforms, education, journalism, literature, science, law, business and industry, etc—who had made some tangible contribution to national life from the beginning of the 19th century to the achievement of independence. It does not confine its scope to only the top few who had achieved an All-India importance, but also includes others who had achieved only regional importance . . . the person to be included in the Dictionary must not only have achieved some reputation in his own sphere of work or profession but must also have made some contribution, either directly or indirectly, to the growth of national consciousness or development of society" (Vol. 1, p. ii). The area covered is whole of undivided India before independence. It also includes living persons, who satisfied the above criteria.

The work covers nearly 1400 biographies. The entries have been arranged alphabetically by surname according to their English spellings but in case of variant spellings, for the same surname, one spellings has been preferred for arrangement e.g. Datta, Dutt and Dutta have been all put under Datta. Length of an entry varies from a minimum of 600 words to a maximum of 2400 words. Thus sketches are like short essays, which are quite readable. Because of

large number of persons being associated with the project, there is some lack of uniformity in the treatment.

At the end of each entry, a selected bibliography has been given for further study which includes published and unpublished documents. Indian language source material has been given more emphasis. Another important feature is that "it is not concerned merely with what a man did but also with what he thought and how he felt *vis-a-vis* the different problems of life and society" (Vol. 1, p. vii). At the end of each entry the name of contributor, who wrote the sketch and also name of research fellow, who collected the biographical material are given.

Dictionary of national biography is useful not only for serious students of history but also for the general public. This is a standard reference book, which every large library must have.

India who's who, 1969-, New Delhi, INFA Publications 1969-, annual.

The volume entitled *India who's who, 1976-77*, appeared in 1977.

This work aims to provide basic biographical information about living Indians "who by virtue of their position and achievements have gained recognition. Individuals who are active have only been listed. . . . Persons holding important position in civil, military, educational, business organisations and those who are a subject of reference interest and inquiry have been listed" (Preface). This shows that less notable persons have not been included.

The biographical sketches are short. Each entry usually contains present position, date of birth, place of birth, names of father, mother and wife, number of sons and daughters, educational qualifications, career, publications, office and residential address and telephone numbers.

The publication is divided into seven sections, namely, business, humanities, public affairs, sciences, sciences applied, social sciences and law, miscellaneous. Within each section further arrangement is alphabetical by subject or profession.

Occurrences during printing (e.g., Dr K.L. Shrimali retired as Vice-Chancellor, Banaras Hindu University since November 1976) and obituary (list of persons with dates of death is given, covering up to 31 December 1976) are given in the beginning. An appendix containing addresses of leading associations, institutions, universities, etc., referred to in the text has been provided. This is a useful list. An alphabetical index to biographies has been given in the end.

This is an extremely useful source, because, it comes out annually

and an attempt is made to update the biographical sketches.

National biographical dictionary of India, compiled by J.S. Sharma, New Delhi, Sterling, 1972.

This biographical dictionary attempts to provide information about the life and thought of those well-known Indians, who played vital role in the history of the country and are considered significant for posterity. This publication aims to cover a period of about 5,000 years extending from the remote past to the present day.

There are about five thousand entries covering persons from all walks of life, e.g., Abul Fazal, Abhimanyu, Guru Arjan, M.K.Gandhi. For each person, a brief biographical sketch has been provided, giving dates of birth and death, profession, summary of important events of their lives and publications, etc. The arrangement is alphabetical usually by surname of the biographee. Cross references have been given in the text. A comprehensive index has been provided at the end, which indexes names of places, persons and any other related significant information found in the text.

This work is helpful in identifying the names of well-known Indians.

Times of India directory & yearbook including who's who, 1914-, Bombay, Times of India Press, 1914-, annual.

In 1977 edition, pages 826 to 873 are devoted to biographical sketches of living Indians. Biographical sketches are short covering full name, degrees, present position, date of birth, positions held, honours won, achievements, office and residential addresses. The list also includes names of ambassadors, high commissioners of foreign countries to India. The entries have been arranged alphabetically by surname. This is an extremely useful work for notable living Indians.

912 Great Britain

Dictionary of national biography, edited by Leslie Stephen and Sidney Lee, London, University Press, 1938-71, 21 volumes and 7 supplements (vol. 1-21, vol. 22 or 1 supplement and 2nd to 7th supplements).

DNB includes over 32,000 biographical sketches of deceased persons of British or Irish race, who "achieved any reasonable measure of distinction in any walk of life." Early settlers in America and persons of foreign birth, who gained eminence in this country have also been included. First 21 volumes contain biographies of individuals, who died before 22 January 1901. There is an index at the end of each volume. Volume 22 is also known as the first supple-

ment covering persons who had been omitted in earlier volumes. Other supplements are: 2nd supplement 1901-1911, 3rd supplement covers 1912-1921, 4th supplement 1922-1930, 5th supplement 1931-1940, 6th supplement 1941-1950, 7th supplement 1950-1960. The seventh supplement published in 1971 brings the entries up to 1960, covering those who died between 1 January 1951 and 31 December 1960. This gives coverage from earliest times up to 1960.

DNB contains long signed articles by specialists in their field. The articles are evaluative and scholarly in nature. Important persons have been dealt with at great length and minor names have been treated briefly. Each sketch is well documented and the information provided is generally reliable and accurate. Excellent bibliographies for further reading have been given.

This is the outstanding biographical dictionary, which serves as a model. It can be very helpful for one who wants to write an article or prepare a speech or requires background information in detail about an individual. It is highly recommended for every large library. However, small libraries can acquire a *Concise dictionary of national biography* (London, Oxford University Press, 1952, 1961, 2 vols), which can serve as an index and provide brief sketches. The same also records corrections and additions to the main set.

Compact edition of the dictionary of national biography, complete text reproduced micrographically, London, Oxford University Press, 1975, 2 vols.

The compact edition of DNB includes the complete and unaltered texts of the 22 volumes of the main DNB and of the six volumes which make up the twentieth century DNB. The twentieth century DNB has been rearranged into a single alphabetical sequence and the provision made for a single index to the entire work.

Who's who; an annual biographical dictionary, London, Adam and Charles Black, 1849-, annual.

This supplements *Who was who* (6 vols.) (vol. I, 1897-1915, vol. II, 1916-1928, vol. III, 1929-1940, vol. IV, 1941-1950, vol. V, 1951-1960, vol. VI, 1961-1970) which contains biographies removed from *Who's who* each year on account of death

This is a biographical dictionary giving information on living men and women of distinction in all fields from all parts of the world. The volume for 1976 contains "more than 26,000 biographies, of all kinds of people in all walks of life—the arts, business and finance, the church, the civil service, education, entertainment and sport, government, the law, local government, professional institutions, the trade unions . . ." (Jacket). The selection is based on personal

achievement or prominence. Most of the biographies are English, however, it also includes some notable persons from other countries.

For each biographee included in the main section, a short entry has been provided giving full name, titles, honours, degrees, present post, date of birth and family details, education, career in date order, publications, recreations and address. The information is covered up to November 1975 and includes, as a supplement, late changes up to the publication of the New Year Honours List.

It also gives an obituary, listing persons who died from mid-November 1974 to mid-November 1975. A supplement has been provided, part I of which contains a selection of the alterations and additions too late for inclusion in the body of the books, noted up to late December 1975. Part II of supplement contains a selection of names included in the New Year Honours List, 1976.

It contains plenty of cross references in the main section of the work, which makes it easier to locate entries for complex names. The book is computer typeset, so that it can be printed speedily. This makes it possible to bring out a new edition in time. A proof of each entry is sent to the biographee concerned for personal revision. This adds to completeness and accuracy of details.

Who was who, London, Adam and Charles Black, 1929-, decennial.

This work contains "the biographies removed from *Who's who* each year on account of death, with final details and date of death added." This is a type of retrospective biographical source. It is restricted to persons no longer alive and the entries are from original current volumes, with final details added further.

So far the following decennial volumes have been published:

Vol. I   1897-1915,
Vol. II   1916-1928,
Vol. III   1929-1940,
Vol. IV   1941-1950,
Vol: V   1951-1960,
Vol. VI   1961-1970.

This source is useful for one, who is looking for dates of birth and death, published works and achievements. It is of no use for one requiring extensive background material.

913 USA

Dictionary of American biography, New York, Charles Scribner's, 1928-1937, 20 vols. and index; Supplement one, 1944; Supplement two, 1958; Supplement three, 1973.

DAB is a retrospective biographical source about the famous and

near famous American people. It contains articles on the lives and achievements of prominent deceased Americans. Though it is limited to Americans, but does have some articles on Bri ish loyalists and officers in the British army at the time of American revolution. Besides, a few foreigners who made significant contribution to the history of the States and also lived in USA for a considerable period of time have also been included. However, DAB covers only those who died prior to 1945.

DAB was prepared "under the auspices of the American Council of Learned Societies." It contains signed articles, usually by experts. The articles are generally authoritative in nature, most of them are based on primary sources of information. However, these are not entirely objective. DAB taken together with supplements contains about 15,000 signed articles, which vary in length from a column to 18 pages. Very often, the length of the sketch indicates the relative importance of the biographee concerned. Each biography includes dates of birth and death; occupation; place of birth; names of parents, spouse, children; education; accomplishments or publications; history of career, analysis of character, analysis of influence; a bibliography of works about the subject of the bibliography.

The arrangement is alphabetical by surname of biographee. The index volume (for 1 to 20 vols.) contains 6 lists arranged by: (*i*) biographies, (*ii*) authors of biographies, (*iii*) birth place of biographees, (*iv*) schools attended by biographees, (*v*) occupation of biographees, and (*vi*) subject index.

DAB provides biographical information on well-known personalities as well as on less-known athletes, industrialists, politicians, scholars and others who at one time or other influenced the national scene.

Each article is signed and many are followed by a bibliography. It serves as a good source for bibliographers because it provides an additional source for works about an individual.

DAB is one of the most famous and highly reliable national retrospective biographical source of information. Every large library should possess this work. The abridged edition (*Concise dictionary of American biography*, edited by J.C.E. Hopkins, New York, Charles Scribner's, 1964) is a useful work for small libraries.

Who's who in America, Chicago, Marquis Who's Who, 1899-,2 vols, biennial.

The publisher specialises in biographical dictionaries, and it brings out a large variety of biographical sources. The publisher has earned good reputation in the field.

In 39th edition (published in 1976), it contains 70,000 biographical entries. The biographies to be covered were selected on the basis of "extent of an individual's reference interest. Such reference interest is judged on either of two factors: (1) the position of responsibility held or (2) the level of significant achievement attained in a career of meritorious activity" (p. xi). The criterion of selection seems to be quite sound. It includes notable Americans from different walks of life and also some foreigners who have made a mark on American scene.

Brief entry is provided about each person covering name, occupation, vital statistics, parents, education, marital information, children, career, career related activities, civic activities, political activities, non-professional directorships, military record, decorations and awards, professional and association memberships, political affiliation, religion, lodges, clubs, writings and other special achievements, home address and office address. There is no evaluation of the biographee.

Biographical sketches are arranged in alphabetical order according to the first letter of last name of the biographee. Each sketch has been presented in the uniform order as mentioned above.

A necrology includes the names of those who were included in previous edition, whose deaths were reported prior to the close of compilation of this edition. A section called "Biographies in Marquis *who's who* Regional Directories" has been added, which increases reference value. In many entries statements submitted by biographees have been added, which is a useful idea.

This is considered as the best-known and highly useful current biographical source for individuals, who have gained national prominence. Each edition is thoroughly revised and brought up-to-date.

Who was who in America, Chicago, Marquis Who's Who, 1897-1973, 6 volumes.

Historical volume, 1607-1896; volume 1, 1897-1942; volume 2, 1943-1950; volume 3, 1951-1960; volume 4, 1961-1968; volume 5, 1969-1973.

This work is a supplement to *Who's who in America*. When a person included in the current volume dies, then his biography is transferred to the next volume of *Who was who*. This serves as a ready-reference source for dates of birth and death, published work, achievements. Of course the sketches are brief enough.

92 PROFESSIONAL AND SUBJECT BIOGRAPHICAL SOURCES

Due to the increase in the number of professionals and growth of

professional bodies, a large number of biographical dictionaries in special fields have appeared during the last three decades or so. These dictionaries include biographies of persons, who are regarded prominent in their chosen field. These are useful for locating addresses, correct spelling of names and miscellaneous information about an individual.

Below are described a few examples of special biographical dictionaries:

921 Education

Directory of American scholars edited by Jaques Cattell Press, 6th ed., New York, Bowker, 1974, 4 volumes.

"The sixth edition of the *Directory of American Scholars* is the culmination of a year's work and nearly 70 years' experience in producing biographical directories by the Jaques Cattell Press" (Preface). This has been published with the cooperation of American Council of Learned Societies.

This set covers more than 38,000 scholars mainly from USA and Canada, very few are from other countries. The four volumes consist of: I. History; II. English, speech and drama; III. Foreign languages, linguistics and Philology; and IV. Philosophy, religion and law.

Criterion for inclusion is based on "Achievement, by reason of experience and training, of a stature in scholarly work equivalent to that associated with the doctorate degree, coupled with presently continued activity in such work; or Achievement as evidenced by publication of scholarly works; or Attainment of a position of substantial responsibility by reason of achievement, (p. ix)."

For each person, the following information has been provided:

Name, birth place and date; citizenship; marriage date and children; discipline; education; professional experience, past and present; concurrent appointments: honours, awards and decorations; military service (optional); current memberships in national professional societies; chief fields of research interest; major publications; mailing address.

The material submitted by biographees has been reproduced as accurately and completely as possible within the confine of format and scope.

Special features include provisions of cross references for scholars with major involvement in several fields; a geographic index, indicating the names of scholars and their disciplines, in each volume. An alphabetic index of all scholars has been given at the end of volume IV. This work is revised regularly and is a well established one.

922 Library Science

Biographical directory of librarians in the United States and Canada, 5th ed., edited by Lee Ash, Chicago, American Library Association, 1970.

This directory includes "active members of the library profession, archivists, or information scientists associated with all types of libraries in the United States and Canada." For each biographee information about place and date of birth, name of spouse, education, languages read or spoken, positions, activities and organizations, honours, publications, areas of professional interest, and mailing address are provided.

Directory of libraries and who's who in library profession in Delhi, edited by N. K. Goil and others, Delhi Library Association, 1964.

Part IV contains *who's who* section. Brief information consisting of full name, qualifications, date of birth, professional status, institution where employed, publications and area of special interest has been provided. The biographical information is dated.

Indian library directory, 3rd edition compiled by S.R. Ranganathan, etc., Delhi, Indian Library Association, 1951.

Chapter 7 provides brief biographical data (who's who) about the members in the library profession in India. The information is provided about date of birth, qualifications, professional status, institutions where employed, publications, membership of professional bodies. This directory is of historical interest only. There is a need for a comprehensive biographical dictionary for Indian librarians.

923 Literature

Who's who of Indian writers, New Delhi, Sahitya Akademi, 1961.

It contains basic biographical and bibliographical information about living Indian authors in all Indian languages including English.

The entries are brief containing name of author, titles and degrees, pseudonym(s), date and place of birth, mother tongue, education, present post of occupation, total number of books (if more than six), publications (limited to six except where he has written on a wide variety of subjects or translated from several languages), address. The entries are arranged alphabetically by surname.

The information provided is factual, mainly based on data provided by the authors themselves.

The work needs to be revised and more information should be provided about each author. Complete list of publications of each author should also be given.

World authors, 1950-1970, edited by John Wakeman, New York,

Wilson, 1975.

This is a companion volume to *Twentieth century authors*.

This work deals with 959 authors, most of whom came to prominence between 1950 and 1970. Some writers who made reputation earlier but could not be included in the previous volumes have also been covered. The authors covered are either of literary importance or exceptionally popular. Most of them are imaginative writers (poets, novelists, and dramatists), there are others who are philosophers, historians, biographers, critics, theologians, scientists and journalists whose work is of wide interest or influence.

About half of the authors, autobiographical articles have been given. The editorial notes on authors and their works were prepared by specialists. At the end of each sketch list of principal works and data about author have been added. Photographs of authors have also been provided.

924 Science and Technology

Dictionary of scientific biography, New York, Charles Scribner's, 1970-1975, 12 volumes.

This work is patterned after *Dictionary of national biography*. It contains more than 5,000 critical essays on outstanding scientists no longer living, mathematicians and natural scientists from more than 60 countries. It includes both short and long essays. Excellent bibliographies of original works and also secondary sources have also been provided. It was prepared by 1000 well-known scholars.

Prepared under the auspices of the American Council of Learned Societies, it should be considered as a major contribution. It is an excellent source for non-Western scientists from countries like Japan, India, China, who are not well represented in standard biographical sources.

McGraw-Hill modern men of science, New York, McGraw-Hill, 1966-1968, 2 volumes.

It contains 846 biographies of leading contemporary scientists. The biographical sketches describe "essential biographical data and extended descriptions of their most significant achievements including background of his work, the problems he faced and how he solved them." The 300 articles were written by the scientists themselves, others were by qualified persons. Most of the entries are about a page in length. The concluding para provides biographical data like education, employment and affiliation. However, the emphasis is on the work done by the scientist rather than his personal life.

Where necessary appropriate background articles from *McGraw-*

Hill encyclopedia of science and technology are cited. Volume 2 contains index to both the volumes. The index is analytical and classified; which provides the approaches through subjects, institutions and scientific fields.

Although it is an excellent source for essay type biographical sketches but it is dated. However, this work is updated to some extent by the *McGraw-Hill Yearbook of science and technology* and *McGraw-Hill encyclopedia of science and technology*.

93 INFORMATION THAT MAY BE LOCATED IN BIOGRAPHICAL SOURCES

(*i*) Names of books written by Mahatma Gandhi,

(*ii*) Names of universities, which awarded honorary degrees to Dr S. R. Ranganathan,

(*iii*) Biographical sketch of Jawaharlal Nehru,

(*iv*) Names of educational institutions attended by Dr Zakir Hussain,

(*v*) Full name of V. K. Krishna Menon and also his full name and date of death,

(*vi*) Title of the first book written by Rabindra Nath Tagore,

(*vii*) Title of the first book written by Prem Chand (a Hindi novelist),

(*viii*) Period of the presidentship of Roosevelt,

(*ix*) Biographical sketch of Sumitranandan Pant,

(*x*) What were the reasons, which led Rabindra Nath Tagore to give up knighthood,

(*xi*) Short biography of Winston Churchill,

(*xii*) Who murdered Valentinian II (a Roman emperor),

(*xiii*) An account of major contributions made by John Maurice Clark to the field of economics,

(*xiv*) Which method of education was originated by Maria Montessori,

(*xv*) What is the real name of Joseph Conrad,

(*xvi*) Names of the most famous paintings drawn by Pablo Ruiz Picasso,

(*xvii*) How many books were written by Jawaharlal Nehru,

(*xviii*) When did Charles Dickens write his first novel,

(*xix*) Brief sketch of John Dewey, with a photograph,

94 CONCLUSION

The international sources have not covered biographies of Indians
adequately. The national sources for India are found inadequate for
individuals who are less prominent. Very often, it is a hard task
in Indian libraries to search for brief sketches of people prominent
in their own profession or subject due to lack of special biographical
sources in many fields. We have nothing to compare with DNB or
DAB. We need comprehensive retrospective and current sources as
well as special biographical sources to cover a variety of fields.

A librarian should give a careful thought before selecting a bio-
graphical dictionary for purchase. One should try to determine the
reputation of compilers, editors and publisher, study the reviews and
if possible examine the work itself to find out its value. A librarian
should know that many of the biographical dictionaries are of
dubious value because often these are sponsored by unscrupulous
persons, who extract money from individuals for including their bio-
graphical sketches.

FURTHER READING

FRANCES NEEL CHENEY, *Fundamenta reference sources*, Chicago, American
    Library Association, 1971, Ch. 3.
ERIC F. GOLDMAN, "Dictionary of American biography," *New York Times Book
    Review*, Sept. 30, 1973, pp. 14-16.
DENIS GROGAN, *Science and technology: an introduction to the literature*, 3rd
    ed., London, Bingley, 1976, Ch. 22.
MARGARET HUTCHINS, *Introduction to reference work*, Chicago, American
    Library Association 1944, Ch. 6.
WILLIAM A. KATZ, *Introduction to reference work*, 3rd. ed., vol. 1, New York,
    McGraw-Hill, 1978, Ch. 7.

14 GEOGRAPHICAL SOURCES

0 INTRODUCTION

THE improvement in the means of communication has led to increase in travel all over the world. As a result the people are becoming more interested in knowing about the places they would like to visit or have already seen. There is also increasing emphasis on the teaching of geography. Besides man has always been curious to know about the world he lives in. Due to above reasons, there is increasing demand for geographical information. In order to cater to the demands of the users, especially large university and public libraries are making an attempt to develop extensive collections of geographical sources of information.

Geographical sources consist primarily of graphic representations. Most of them are produced through team effort. These are made use of to find out answers to geographical questions. Geographical questions are concerned with information about places such as cities, towns, mountains, lakes, rivers, forests, etc., regarding their location, description and other details. For instance, location of Varanasi, distance between Delhi and Jaipur, population of Tokyo, etc. Such questions can be asked in various forms and details.

One problem about geographic facts is that some of these may have no firm basis. For instance, in a particular case, a place name may be spelled in a number of ways if no standard method for transliteration from one language to another exists. In case population of a given region has to be estimated, then estimates may differ. If a river is formed out of many streams, then it may be difficult to pin down the exact source of the river.

1 TYPES

Geographical information can be located in a variety of sources of information. Each has its usefulness. There is much duplication of information in these sources. Therefore, a reference librarian should make use of wise and careful selection.

We may recognize the following sources of information, which can

be used for getting geographical information:

   (*i*) Bibliographies and indexes;

   (*ii*) Encyclopaedias;

  (*iii*) Dictionaries;

   (*iv*) Sources of statistics;

   (*v*) Biographical sources; and

   (*vi*) Geographical sources.

(*i*) *Bibliographies and indexes.* Bibliographies are useful for locating geographical sources. Indexing and abstracting periodicals are helpful for locating articles on cities, towns, places of interest, etc. These do not contain the information itself but direct one to sources, which contain information.

(*ii*) *Encyclopaedias.* These are extremely useful sources of geographical information regarding countries, states, cities, etc. These are also good sources for maps. But for small areas and thematic maps, one should consult geographical sources. Encyclopaedias provide enough information about historical and socio-economic aspects of places covered by it. In this respect, encyclopaedias are superior to geographical sources. Besides, the articles in encyclopaedias are usually more detailed and comprehensive covering many facets. On the other hand description given in a gazetteer lays emphasis on geographical details.

(*iii*) *Dictionaries.* These provide definitions of geographical terms. These also help in the identification of large cities and towns. Very often, these provide population figures for countries, states, towns, etc.

(*iv*) *Sources of Statistics.* These provide data in tabular forms and also thematic maps. Sources of statistics, very often, give geographical data in readily accessible form.

(*v*) *Biographical Sources.* These are extremely useful for biographies of geographers and cartographers.

(*vi*) *Geographical Sources.* These are specific sources, which are specifically prepared to provide geographical information. These occur in large variety, varying in scope and form. For our purpose, we may recognize the following types of geographical sources:

   (*i*) Gazetteers,

   (*ii*) Guide books,

  (*iii*) Atlases, maps and globes.

2 GAZETTEERS

A gazetteer is a geographical dictionary of places arranged alphabeti-

cally. It serves as a finding list for geographical places like towns, cities, oceans, rivers, lakes, mountains, etc., giving indication about location (usually in the form of exact latitude and longitude) and a brief description (such as pronunciation, population, area, historical and socio-economic information, etc). It is essential that it should provide officially standardized form of spelling of place-names, along with cross-references to variant spellings. The emphasis should be on inclusiveness of entries. The information should be up-to-date.

From above, it follows that an index to any atlas can be considered a gazetteer. A gazetteer is the same as that of an atlas but the former is usually without maps. The main value of a gazetteer lies in the fact that it often helps in locating places, which may not have been covered by an index to a standard atlas. Thus, we find that a gazetteer is usually more comprehensive than the index to an atlas. As most of the gazetteers provide latitude and longitude, therefore it becomes possible to locate places on a large scale map.

The following criteria may be laid down for the evaluation of a gazetteer:

Authority, scope, number of entries, arrangement, amount of information, special features, drawbacks and conclusion.

Authoritativeness of the work can usually be judged on the basis of the reputation of the sponsoring body (if any), publisher, distributor, author or compiler. In this regard, it is essential to know the subject and academic qualifications of the author or compiler.

Scope refers to the limitations of the work as stated by the author or compiler, with regard to geographical area covered or limitation of some other kind. For instance, *Webster's geographical dictionary* is an international gazetteer but does not include towns under 1500 population in the US and under 25,000 in Japan, China and the USSR.

Number of entries, gives some idea about the comprehensiveness of the work. The number of cross references indicates the adequacy or inadequacy of such a provision.

Usually the arrangement of entries is alphabetical by place-name.

Items of information may include name of place, pronunciation, location, area, population, geographical and physical description, economic and historical data, etc. A detailed account would enhance the value of a gazetteer.

Special features may include provision of maps.

Geographical place names and boundaries change frequently. Other items like population, economic features, etc., are liable to change. Therefore, a gazetteer, which is not revised frequently would not be

able to keep itself up-to-date. *Columbia Lippincott gazetteer of the world* gives old census figures, which is a great drawback.

On the basis of evaluation, one should be able to form overall judgment and indicate whether the work is to be recommended for a library or not. If so, one should be able to specify the kind of library (small, large, medium, special, public, and academic), which will benefit most.

A few examples of important gazetteers are described below:

Columbia Lippincott gazetteer of the world, New York, Columbia University Press, 1952 (Supplement, 1962).

This gazetteer has been edited by Leon Seltzer with the Geographical Research Staff of Columbia University Press and with the cooperation of the American Geographical Society. The individuals and organizations associated with the work are authoritative in nature. It is an international gazetteer including every possible town likely to find its way onto a map, incorporated or not. This is considered as a comprehensive geographical dictionary of places all over the world. The emphasis is on the modern world.

This work contains about 130,000 entries. The work is very heavy and thus bulky, making it difficult to handle. It gives considerable information for each place included, varying from a brief note about villages to long essays on rivers. The entries include pronunciation, location, area, population, geographical and physical description, and economic and historical data. In fact, considerable amount of socio-economic information has been provided. The entries have been arranged alphabetically dictionary-wise. There are adequate cross references.

The supplement published in 1962 comprises 23 pages but it is extremely useful in the sense that it updates facts and figures from the 1952 edition. The supplement includes 1960 census figures for America but essentially the work is the same as the first edition which was published in 1952. Maps, charts and graphs have not been given.

As compared with *Webster's geographical dictionary*, it is bulky, contains 130,000 entries (Webster contains 40,000 entries), gives information about each place but information is old, includes every possible town (Webster is selective), lists more geographical features than Webster. It is an important gazetteer, found in every large library. It provides accurate information about most of the important places of the world.

Gazetteer of India: Indian Union, Delhi, Publications Division, Ministry of Information and Broadcasting, Government of India,

1965-1978, 4 volumes (Ministry of Education and Social Welfare, Government of India is the publisher of volumes 2-4).

The first edition of the *Imperial gazetteer of India* was published in 1881 in nine volumes. The companion volume, *The Indian empire: Its history, people and products*, appeared in 1882. The second edition of the *Imperial gazetteer of India* came out in 1885-1887, in 14 volumes. New revised edition was issued in 1907-1909 in 26 volumes. In the new edition, in addition to the India volumes, a provincial series with the Provinces as units and a district gazetteer series with the districts as units were also issued. This work was regarded as an authoritative and comprehensive study of India and its people.

The revised version of *Imperial gazetteer of India* is entitled *Gazetteer of India: Indian Union*. It has been published in four volumes,— vol. I: Country and people, vol. II: History and culture, vol. III: Economic structure and activities, vol. IV: Administration and public welfare. This corresponds to the first four volumes of *Imperial gazetteer*. Besides, district gazetteers are also being published. Their total number is going to be over 300. These are being brought out by the state governments.

This work is the result of cooperation of scholars, administrators and compilers. Each chapter and where required, a section of the chapter is contributed by a specialist, well-known in his field. The previous edition was written primarily for the use of British administration. But this one aims to educate administrators as well as the people.

There are bibliographies given for further reading. Plenty of tables, charts, maps, etc., have been added. Each volume has a separate detailed index.

This is a useful and authoritative work about India and its people. Tremendous amount of information about various aspects has been provided. A reference department of any library will find it a mine of information.

Statesman's yearbook world gazetteer, edited by John Paxton, London, MacMillan, 1975, irregular.

This yearbook "provides absolutely up-to-date information about every place one is likely to encounter in the course of general reading." A work of this kind cannot possibly cover every place in the world. Therefore, it covers places of importance of size. Some of the places have been included because these were considered of historical importance.

A basic entry has been provided for each place included in the

work, usually giving the location, the size of population and the inhabitants' source of income, and provides details of recent history, its industries and population. "The essential details about countries of the world are given, but no attempt has been made to duplicate the detailed descriptions which appear in the annual volumes of *The Statesman's yearbook*" (Introduction, p. ix). More details have been provided about each country. In case of small places, fewer details have been given. The details provided are quite up-to-date.

A separate section provides precise definitions of over 900 geographical terms. A 24-page map section and a selection of comparative statistical tables have also been given.

This publication has been brought out as a companion volume to *The Statesman's yearbook* (annual). It contains extra information about individual places, which cannot be provided fully in the annual. This is a handy work.

Webster's geographical dictionary, rev. ed., Springfield, Mass., Merriam, 1972.

It is an international gazetteer primarily meant for American users.

It contains entries for geographical names, covering both current places and historical names. Does not include towns under 1,500 population in the United States and under 25,000 in Japan, China and the USSR.

Contains about 48,000 entries, arranged alphabetically.

Gives short account as compared with *Columbia Lippincott*. Each entry for geographical name includes pronunciation, location, area, population, geographical and physical description, and economic and historical data. Amount of information provided varies depending upon the importance of entry and probable value of such information to the user. There are adequate cross references.

This revised edition includes 1970 census figures for America in the main text. On the other hand, *Columbia Lippincott* provides the census figures completely out of date because these are essentially the same as found in the first edition published in 1952. However, *Columbia* is more comprehensive and provides greater details.

It contains about 217 maps. The introduction section defines common geographical terms. It also provides glossary of geographical terms with foreign equivalents.

This gazetteer is compact in size and priced one-ninth of *Columbia Lippincott*. It provides in a single handy volume, a selected list of geographical names, giving adequate information to serve the needs

of the general users. Every library must have it.

3 GUIDEBOOKS

Due to improvement in the means of communication, more and more people are beginning to travel. Those who want to travel require the help of guidebooks. A guidebook is defined as, "a handbook for travellers that gives information about a city, region or country or a similar handbook about a building, museum, etc."[1] The aim of a guidebook is primarily to tell the traveller as to what he should see, where he should stay, where he should take his food, and how he should reach the place. This type of reference book is a handy work, easy to carry and handle, written for travellers. It is supposed to contain enough local information about countries, places (sights worth seeing, places of amusements, etc.), routes, accommodation, exchange rate, fares, climate, custom duty, etc. It should include all that a traveller to a new place would like to know. These are very useful in a reference section for historical and geographical information. For certain kind of local information, such as local maps, plans of cities, places worth visiting, places of amusements, etc., these are certainly more useful than gazetteers as these tend to provide detailed information.

The modern travel guides have multiplied to such a large extent that a given library can acquire only a selected few. There are a few well-known series publications in this area. These are Baedeker series; Fodor's modern guides; American guide series; Muirhead's blue guide series, etc.

A few travel guides for India are listed below:

Fodor's India, 1978, London, McKay, 1978.

This is an excellent definitive handbook for travellers. It gives maps, illustrations. This guide is published annually.

Murray's guide or handbook for travellers in India, Pakistan, Burma, and Ceylon, 21st ed., London, Murray, 1968.

This is a first rate travel guide. Provides maps, lists of terms, lists of books for further reading, etc., so as to enable a traveller to plan his travel properly.

Tourist guide-India (covering different places of interest), New Delhi, Department of Tourism, Government of India.

The railway, sea, and air guides may be regarded as a separate cate-

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[1]*A.L.A. glossary of library terms with a selection of terms in related fields*, Chicago, American Library Association, 1943, p. 67.

gory of guidebooks. The time tables, schedules, etc., of trains, airlines, buses, ships are required in libraries. *Newman's Indian Bradshaw* (Calcutta, W. Newman) is a monthly, which serves as a guide for railway and air travellers in India and Bangladesh. This contains time and fare tables of all railways, air services and motor services of hill stations and health resorts, out-agencies and places of tourist interest in India and Bangladesh.

4 MAPS, ATLASES AND GLOBES

Maps, atlases and globes form important sources of geographical information. These are necessary reference sources in any type of library. Indian libraries have not given enough attention to this kind of materials.

A map is defined as, "a representation of a part or the whole of the surface of the earth or of a celestial body, delineated on a plane surface, each point in the drawing intended to correspond to a geographical or a celestial position."[2] Thus a map is a representation of the outer boundaries of a part or the whole of the earth or moon or planets on a plane surface. A map may be of a city or village or of a smaller area irrespective of the scale or extent of area. There are a variety of maps such as physical map, political map, route map, thematic map, etc.

An atlas is a volume consisting of a collection of maps. These vary a great deal in quality and also are pretty expensive. Therefore, these must be selected carefully, keeping in view the views of the experts. One should examine these personally for their suitability. It may be mentioned that general atlases, which cover the whole world differ a great deal in their content. For instance, an American atlas will include more or larger maps for American regions.

Evaluation of maps and atlases is somewhat different from the evaluation of other reference books. It requires a special kind of knowledge. In order to evaluate maps, one may use the following criteria:

Authority (Name and nationality of the maker would indicate quality of the work),

Date (Indicates currency which is an important consideration as place names change frequently),

Method of showing relief (Has the method been used effectively?),

Types of maps (Political, physical, historical, etc.),

[2]*Ibid.*, p. 86.

Projection, scale, size of maps,
Use of colours (Have colours been used purposefully?),
Showing of details (How effectively the details have been shown?)
Are the maps accurate in the matter of details?),
Conclusion (To be recommended or not).
In order to evaluate an atlas, we may lay down the following criteria:
Authority (The experience and reputation of publisher, editorial staff and special contributors),
Scope and purpose,
Currency (Dates of publication, copyright, preface and revision would indicate currency),
Arrangement and organization of maps, text and indexes,
Range and quality of maps (A good map should be accurate, easy to read and good to look at),
Quality of index,
Supplementary matter such as bibliographies, charts, illustrations, tables, photographs, descriptive text, statistical information, etc.,
Conclusion (To be recommended or not).

Note. In an atlas, quality and range of maps is extremely important. Provision of photographs and other supplementary material at the cost of maps decreases the value of an atlas. Fair allocation of space to maps should be an important consideration in the evaluation of an atlas.

A globe is a spherical representation of the earth. It is considered the only relatively accurate representation of our earth. It is required rarely only in specialized situations. However, no school library can do without it.

A few examples of important atlases are described below:

Britannica atlas, Chicago, Encyclopaedia Britannica, 1977.

By means of colour maps and charts, this atlas attempts to provide the latest facts about the present-day world regarding population, location of places, land use patterns and other local features of metropolitan agglomerations, physical characteristics of countries, etc. This is an encyclopaedic-type atlas.

The emphasis is on internationalism of content and complete comparability among the maps. The attempt has been made to avoid local prejudices and tastes. The stress is on truly international character of contents.

First a global view of the world and of the oceans, has been provided followed by an overall survey of continents. This is followed

by a closer view of all regions within continents and so on.

At the back of the atlas is a 29-page section of 60 maps of world's major urban centres. These maps show land-use patterns and other local features of great metropolitan agglomerations. Other special features include provision of world information table, population of cities and towns and glossary of geographical terms.

The arrangement of maps is such that these get progressively more detailed but always aim to provide comparable view of the earth's surface. There is a detailed index at the end.

One can quickly, locate, identify and compare data for countries, continents, oceans, seas, rivers, other places or body of water in the atlas. The maps are of first-rate quality generally up-to-date and well indexed. This is an excellent atlas.

Hammond medallion world atlas, new census edition, Maplewood, New Jersey, Hammond, 1971.

C.S. Hammond company is one of the best-known American map maker. It brings out a variety of atlases and has a high reputation.

This atlas contains about 600 maps. The maps are large, accurate and show effective use of colour. Zip codes; information on ecology and Bible; information on history; large number of diagrams and photographs, etc., have been provided. The index is an excellent one containing over 100,000 place names. There are a number of sub-indexes of various places given along with maps.

This is a highly accurate and relatively inexpensive atlas. It follows the policy of frequent revision, which makes it reasonably up-to-date.

Rand McNally commercial atlas and marketing guide, Chicago, Rand McNally, 1876-, annual.

This work serves as an atlas and a handy compilation of up-to-date statistics, the concentration is on the United States.

This contains an enormous amount of statistical information, giving retail sales maps, analysis of business and manufacturers, principal business centres, population, communications, agriculture, etc., about each state of the United States. Each state map lays emphasis on the political-commercial aspects of the state. These maps provide basic demographic and business data for 116,000 places in USA. Of course, a small number of world and foreign maps have also been provided.

The detailed index serves as a source of information for: location of cities and towns by state and country; the number and names of railroads and airlines serving the community; estimated current population; zipcodes.

This is an excellent source for current statistics, though limited for

the most part to the United States of America. This is a remarkable work especially for statistics on smaller geographical areas like US cities and countries. An important feature being that it is revised annually, recording accurately changes which have occurred.

Rand McNally new cosmopolitan world atlas, Planet Earth ed., Chicago, McNally, 1971.

Rand McNally and Company is one of the best-known map makers. It brings out a variety of atlases and has a high reputation.

This atlas contains 400 maps, with a large number of map inserts. Scale ranges from 1:2,000,000 to 1:16,000,000. Maps are accurate and attractive. It also includes illustrations, diagrams, and brief articles on topics like weather, geology, oceans, etc.

The index is an excellent one listing about 82,000 places and features. This is relatively inexpensive and highly accurate atlas. This follows the policy of continuous revision.

Times atlas of the world, comprehensive edition, London, Times, 1971.

The first section consisting of 40 pages is devoted to a conspectus of world minerals, sources of energy and food, and a variety of diagrams and star charts. The atlas proper consists of 123 double page maps, many devoted to special thematic features such as oceanography, climate, population and communications.

The third section consists of name index, covering 200,000 entries. Each entry consists of name, country's name and exact reference to a map. The index serves as an excellent gazetteer.

It provides detailed coverage of different countries of the world. The typography and colours of maps are highly effective. The typefaces are clear, so that a user can easily read the large number of names. A great variety of colours have been used with a great degree of skill and aesthetics. Symbols are used to show the significant features.

It is considered the best atlas. This is also the most expensive due to the efforts put in its preparation. The emphasis is on large scale, multiple maps for several countries. Great attention has been provided to details and colour. Such excellent results are rarely achieved in an individual map or atlas.

5 INFORMATION THAT MAY BE LOCATED IN GEOGRAPHICAL SOURCES

(*i*) Capitals of Indonesia, Ceylon and Cnile,
   (*ii*) Area and population of Punjab,

(*iii*) List of monuments in Delhi,

(*iv*) Railway train distance between Delhi and Bombay,

(*v*) First class railway fare by mail train from Delhi to Calcutta,

(*vi*) Main tourist attractions in India,

(*vii*) Important historical places in Punjab,

(*viii*) Length of river Nile,

(*ix*) Names of countries included under South-East Asia,

(*x*) Names of countries, one would cross while travelling by road   .
from Delhi to Paris,

(*xi*) Explanation of the following terms:
Air temperature, sub-arctic, coniferous forest, cascades, meander, steppe,

(*xii*) Air distance between Delhi and London,

(*xiii*) Topographical account of Kashmir Valley,

(*xiv*) Detailed information about Bombay for a person, who wants
to pay a visit to it,

(*xv*) Location of Harvey isles,

(*xvi*) Historical account of Meerut District,

(*xvii*) How to pronounce 'Ganges,'

(*xviii*) Climate of Rajasthan,

(*xix*) Information about places to stay in Calcutta,

(*xx*) Chart pertaining to major world shipping and air routes,

(*xxi*) Month of heaviest rainfall in London,

(*xxii*) Are Singapur and Japan in the same time zone,

(*xxiii*) Locate Chicago on the map.

6 CONCLUSION

Geographical sources are important sources of information. Every large library should have an extensive collection of these. Even a small library should have a few basic geographical sources. The number and variety of these sources is extremely large, varying greatly in quality. One should select them rather carefully. For this one should take into consideration reviews written by experts. These works become dated quickly. A given library may not be in a position to purchase revised edition regularly. The only way out would be to consult yearbooks and almanacs to check for latest information, if necessary. It may be mentioned that India is not well served in the matter of geographical sources. Very often, for information on India one has to depend upon sources published abroad.

FURTHER READING

Frances Neel Cheney, *Fundamental reference sources*, Chicago, American Library Association, 1971, Ch. 7, pp. 276-79.

Margaret Hutchins, *Introduction to reference work*, Chicago, American Library Association, 1944, pp. 66-68.

William A. Katz, *Introduction to reference work*, 3rd ed., vol. I, New York, McGraw-Hill, 1978, Ch. 9.

"Map collections," *Illinois Libraries*, May 1974.

15 DIRECTORIES

0 INTRODUCTION

DIRECTORIES form the largest category of reference sources. It is not easily possible to estimate the number of directories published every year because many of these published locally may not be copyrighted. A collection of directories in print would easily fill a large library. Their number would be few hundred thousand volumes. Directories are a rich source of information. These vary in kinds, sizes and purposes. It may occur as a separate publication or as a part of another publication.

1 DEFINITION

A directory is "a list of persons or organizations systematically arranged, usually in alphabetic or classed order, giving addresses, affiliation, etc., for individuals and addresses, officers, functions and similar data for organizations."[1] In practice the term directory is employed in a wider sense. Even a list of periodicals or newspapers or places may be termed a directory. The amount of information provided varies from one directory to another. Usually alphabetic arrangement is used to arrange such a list. In this chapter, the use of the term directory will be restricted to a list of organizations, giving addresses, functions, names of officers and similar data.

2 SCOPE

Directories provide information about organizations of different kinds covering learned bodies, scientific societies, professional bodies, trade associations, etc. For each organization, variety of information like names, addresses, list of office bearers, qualification of membership, etc , are included.

These form a rich source of biographical information, sources of

[1]*A.L.A. glossary of library terms,* Chicago, American Library Association. 1943, p. 47.

names and addresses for mailing lists (Topical listing in a telephone directory serves such a purpose. A list of booksellers or photographers can be used for a specific purpose), buying guides (products of manufacturers are listed in a manufacturer's directory), etc.

Some of the information provided in directories can also be obtained from yearbooks, almanacs, encyclopaedias, etc. These contain vast amount of directory type information. For information about organizations, a reference librarian would usually consult a directory as a first source of information because a directory is most likely to provide such information and is compiled to serve such a purpose.

3 TYPES

We may recognize the following types of directories:
General: International, national/regional, local.
Others: Scientific and learned societies, trades, professions, etc.

4 PUBLISHERS

Majority of directories are brought out by commercial firms. Telephone companies also publish a very large number of directories. Government agencies form a large publisher in this area. Associations bring out directories relating to their members.

5 CRITERIA FOR EVALUATION

The checklist for the evaluation of a directory for the purpose of its study should consist of authority, scope, method of compilation, treatment, arrangement, items of information, indexes, special features, drawbacks, format and conclusion.

Authority
The work should be an authoritative one. That means, it should be dependable and contain accurate information. The authoritativeness of a directory can usually be judged on the basis of the reputation of the compiler(s), editor(s), sponsoring body, publisher and distributor. In order to consider about the reputation, one should also know the academic qualifications and experience of the compiler(s) and editor(s).

Scope

The scope of a directory should be related to the following:

(a) Purpose of the work as stated in the preface or introduction,

(b) Limitations with regard to subject, kinds of materials, language, place, time, etc.,

(c) Whether it is comprehensive or selective, current or retrospective.

Method of Compilation

It would show whether primary method or secondary method has been employed to collect information. It will further indicate the degree of reliability of information.

Treatment

One should try to find out, how thorough, accurate and complete are the facts provided in the work.

Arrangement

The sequence of the entries may be alphabetical, chronological or geographical.

Items of Information

It is not easily possible to prescribe the items of informatiom to be provided. These will vary depending upon the purpose of a directory. On one extreme, we have bare minimum information containing the name and address of an organization. The other extreme could be to provide detailed information about each organization for which no limit can be prescribed.

Indexes

Provision of detailed and well constructed indexes enables one to locate information quickly. This adds to the value of a given reference work.

Special Features

Questions as to whether the work is new, the only one of its kind, or unique may be raised. What for instance, is its distinctiveness? It is revised regularly and kept up-to-date.

Drawbacks

Does it give up-to-date information? What is the time lag between period of information and its inclusion in work?

Format

Are the headings and subheadings bold enough to stand out clearly?
Are the typefaces clear and legible?

How is the physical get up of the book?

Conclusion

Conclusion should include overall judgment about the reference book.

Is the work to be recommended or not? If so, specify the kind of library, which will benefit.

6 INTERNATIONAL

The sources of information for international organizations are described below:

Europa yearbook, 1959-, London, Europa, 1959-, 2 vols. annual.

The first volume covers international organizations and countries of Europe (including USSR and Turkey). The second volume covers countries of Africa, North and South America, Australiasia and Asia. First part of first volume covers international organizations arranged alphabetically. It gives detailed information about the UN and other leading international organizations. Besides, it describes functions, membership; address and the date of foundation for lesser known international organizations. The index to volume one lists international organizations. For each country the directory section contains the names, addresses and other useful data about newspapers and periodicals, publishers, radio and television, banks, insurance, chambers of commerce, trade associations and trade unions, airlines, railway and shipping organizations, and universities.

This is an excellent source for names and addresses of international organizations. This is highly recommended for libraries of various types.

Statesman's yearbook, 1864-, London, Macmillan, 1864-, annual.

Main portion of the work is divided into 4 parts. Part I gives information about the United Nations, agencies related to the UN, World Council of Churches, International Trade Unionism, European Organizations like OECD, NATO, etc. Other international organizations covered include Colombo Plan, SEATO, CENTO, Arab League, Organization of African Unity. etc. Information is usually provided about origin, functions, organization, headquarters, name of president, name of secretary and publications, etc. A useful list of books of reference is given at the end of each item. The information provided about each organization is rather brief.

World of learning, 1947-, London, Europa Publications, 1947-, annual, 2 volumes.

World of learning is brought out by 'Europa Publications,' which has a high reputation. It contains names, addresses, and other details of over 24,000 universities, colleges, libraries, museums, art galleries, learned societies and research institutions and 150,000 people active in them. Volume I covers more than 400 international, educational, scientific and cultural organizations as well as countries from Afghanistan to Qatar. Volume II deals with countries from Rhodesia to Zambia. A very useful index of institutions is given at the end of the second volume.

It is a mine of information. The information has been given countrywise alphabetically. Within each country, further alphabetical entries are made under the categories.

For India, it lists academics, learned societies, research institutions, libraries and archives, museums and art galleries, universities, institutes with university status, schools of art and music, selected colleges. Brief information about each organization is provided. For example in case of A.N. Sinha Institute of Social Studies, the information provided includes address, year of foundation, brief objectives of institute, number of volumes in its library, names of director and secretary of the institute and its publications. However, it may be added that amount of information for a given institute varies.

World of learning is considered as an outstanding reference work. It is a comprehensive and up-to-date directory of institutions throughout the world.

Yearbook of international organizations, 15th ed., Brussels, Union of International Associations, 1974.

Covers 4310 organizations, giving name, address, date of foundation, aims, structure, staff, finance, consultative status, activities, publications, membership, etc. A variety of indexes and useful supplements have been provided.

Yearbook of the United Nations, 1946/47-, New York, United Nations, Office of Public Information, 1947-, annual.

This yearbook provides comprehensive record of the yearly activities of the United Nations and its related agencies. It is divided into two sections. The first one covers political, economic, social and security questions before the United Nations for a particular year. The second section deals with inter-governmental organizations related to the United Nations such as IAEA, ILO, UNESCO, WHO, UPU, IDA, etc.

Documentary references provided at the end of each chapter are

useful for further study.

It contains 4 appendices: (*i*) Roster of the United Nations, (*ii*) The charter of the United Nations and the statute of the International Court of Justice, (*iii*) The structure of the United Nations, and (*iv*) United Nations Information Centres and Offices.

At the end detailed subject index and index of names have been provided, which serve a useful purpose.

This is an invaluable publication for those who are interested in the activities of the United Nations and related agencies. The volumes published up to now provide an excellent summary of the activities of the United Nations and its related bodies. The work maintains a high standard of accuracy and objectivity. However, the publication programme is usually late by two or three years.

7 NATIONAL

Encyclopedia of associations, 10th ed., Detroit, Gale, 1976, 3 volumes.

The scope becomes clear from the following:

Volume I deals with national associations of the United States giving detailed descriptions of national, trade, professional, and other organizations.

Volume II gives geographic and executive index, covering materials given in volume I.

Volume III covers new associations, through periodic reports in loose leaf form concerning newly formed and newly found associations.

Foreign groups are included if they are considered to be of interest to Americans. International groups are covered, if they have a large membership or if they are of special interest to Americans.

Gives minimum information including year of founding, name of president, total membership, committees, publications, address, phone number, etc. This is a comprehensive and up-to-date source for national associations of United States of America.

Times of India directory & yearbook including who's who, 1914-, Bombay, Times of India Press, 1914-, annual.

This is a trade directory, yearbook and a biographical dictionary combined in one. However, it is restricted to India. First section is a trade directory for buyers. Lists of state associations, chambers of commerce, commercial firms (manufacturers), commercial firms (dealers) and commercial firms (services) along with their addresses have been provided. Gives a list of corporate giants in India in public and private sectors, giving rank, name of company, and total

assets. The names of organizations as well as fields of specialization have been indexed in the index. A person interested in knowing the names of commercial firms manufacturing fans, will find an entry under *Manufacturers—fans*. This will take him to the main part of the work, which will provide a list of manufacturers of fans along with their addresses. Similarly a list of political parties along with their addresses has also been given.

A great deal of information, which is not easily available elsewhere has been provided. There are certain weaknesses. A random check shows that it is not comprehensive in its coverage. The index needs to be more detailed. This is certainly a very useful work.

8 LOCAL

Delhi telephone directory, May 1976, Delhi, Indian Posts and Telegraphs Department, 1976, irregular.

First section is called an alphabetical section. Second section is for central government and states. The last section is a classified list, which lists various trades and professions in alphabetical order of classification.

An entry in the first two sections consists of the name of the individual or organization, address, names of its officers (in case of an organization) and telephone number(s). The classified list includes names, addresses, telephone numbers and very often other details about the organization concerned are also given. For example, under Indian Aluminium Company Limited, it is mentioned that "The company manufactures and deals in aluminium and its semi-fabricated products viz. ingots, sheets, circles, extrusions ..." Plenty of cross references have been given.

This is an indispensable source for locating addresses of individuals and organization and names of officers of organizations located in Delhi. This is a highly reliable source of information.

91 SCIENTIFIC AND LEARNED SOCIETIES, TRADES, PROFESSIONS, ETC

911 *Libraries and Documentation Centres*

9111 INTERNATIONAL

Bowker annual of library and book trade information, edition 1-, 1956-, New York, Bowker, 1956-, annual.

Bowker annual serves as a directory, a handbook, an almanac, etc.

The scope is clear from contents of various parts as given below:

Part 1 Reports from national associations and agencies; Part 2 Developments in librarianship and publishing; Part 3 Publishing industry trends and statistics; Part 4 Library statistics; Part 5 Library education, personnel, and salaries; Part 6 International library and book trade news; Part 7 Reference and directory information: Books and others—grants, scholarships, awards—calendar-associations and agencies.

This annual also provides a list of selected US libraries, giving addresses and their telephone numbers. 21st edition was published in 1976, which contains a cumulative index for 5 years covering 1972-76 editions. This is a useful work, describing the activities of organizations in the fields of library and book trade, mainly covering USA.

World guide to libraries, compiled by Klaus G. Saur, 2nd edition, New York, Bowker, 1968, 3 parts (Part 1 Europe, Part 2 Africa, America, Asia and Oceanien, Part 3 Index).

It covers special and general libraries. The minimum collection required for a special library to be included in the guide is 3,000 and for a general library is 30,000 books. This guide contains about 30,000 addresses. It is classified by continent and within each continent by countries. The entries for each country are grouped under cities and towns. For each library information consists of name and address of the library, year of establishment, number of volumes, fields of collection, special fields, type of library and serial number. In order to collect information, 35,000 questionnaires were sent to libraries all over the world. There was 30 per cent response. For others, aid was taken from national library associations, national libraries and directories of libraries.

Part 3 contains geographical index, subject index 'to the fields of collections of each library with over 100,000 informative entries, an international bibliography of library directories and a list of addresses of the libraries' associations. This is a work useful for librarians, documentalists and persons belonging to book trade. However, the work needs to be revised to make it up-to-date.

World guide to technical information and documentation services, 2nd ed., Paris, Unesco Press, 1975.

This guide lists 476 centres in 93 countries, covering international centres and national institutions in major subject fields. The data was compiled for Unesco by the secretariat of FID by means of a questionnaire, which was sent to the centres in about 100 countries.

In the beginning an alphabetical list of countries is given. This

is followed by entries on international centres and national institutional centres and national institutions. The national institutions have been grouped by country. Each entry provides information about the centre including name, address, short history, library collections, services provided (abstracting, bibliographies and literature searches, translations, documentation reproduction, other services), publications, etc. References to international and national directories have been given, so that one can consult full list, if one so desires.

This guide will be found useful by documentation centres, libraries, researchers and others who are seeking information in the field of technology.

9112 NATIONAL

American library directory, 1976-77, 30th edition, edited by J.C. Press, New York, Bowker, 1976.

This directory lists libraries in the United States and Canada as well as in Puerto Rico and regions administered by the United States giving brief information about each. The libraries are listed geographically by state (or province) and city, and under each town or city alphabetically by name. Also covers networks, consortia and other cooperative organizations. Library agencies, library schools, training courses, US Armed Forces libraries overseas and US information centres are also included. An index has been given at the end. This is a highly useful directory.

Directory of special and research libraries in India, compiled by IASLIC, Calcutta, IASLIC, 1962.

It is restricted to "those libraries which specialize in subjects—catering to the research needs of specialists, to the university and other academic libraries which contain sufficient source material for research work and to the libraries of the research and learned bodies which have large stock of such materials" (p. i). It covers 173 libraries out of the then estimated 400 libraries. For each library, information has been provided about full name, address, year of founding, area, shelving space, reading room accommodation, status, and finance, name of parent body, subjects covered, annual budget, clientele, resources, annual acquisition, catalogue (form and type), staff, staff salary, charging system, access (open or close), circulation figures, name of librarian, status of librarian and his scale of pay. Entries have been arranged alphabetically according to name of library based on letter by letter principle. Cross references have been given for variant names. Name (name of libraries), place (place of,

location of library), subject, nature of management (kind of parent body) and indexes have also been provided. At the end a list of other libraries with specialized collection have been listed, arranged alphabetically state-wise. However, the areas of specialization have not been mentioned. These other libraries should have been indexed by subject of specialization.

This is a useful directory, which needs to be revised to bring the information up-to-date.

Indian library directory, compiled by S.R. Ranganathan and others, 3rd ed., Delhi, Indian Library Association, 1951.

It provides detailed information about 363 libraries. Index groups libraries by State. It provides detailed information about various library associations, schools of library science, library literature published in India. At the end, who's who is given. This directory is merely of historical interest. It should be revised by Indian Library Association so as to fill up the void.

Libraries in India, 1951, New Delhi, Manager of Publications [1952].

It covers about 1200 libraries. The information relates to year 1950-51 (1st April, 1950 to 31st March 1951). It excludes all public libraries with less than 5,000 volumes. The libraries have been grouped in 6 categories: Government of India; state government; university and college; research institutions, laboratories and societies; public schools; public libraries. This directory is more or less of historical interest.

Libraries in the United Kingdom and the Republic of Ireland, London, Library Association, 1975.

This is claimed to be a complete list of public libraries, select list of academic and other libraries. For each library, the name, address, name of librarian and telephone number (also Telex number, if applicable) are given. The same information is provided about various libraries in a system like central library, branch libraries, etc. A list of schools of librarianship is also given. For each school, the name, complete address, name of the head, telephone number (also Telex number, if applicable) are given. An index has been given at the end to provide approach through names of libraries, persons, names of places, etc.

9113 LOCAL

Directory of libraries and who's who in library profession in Delhi, edited by N.K. Goil, etc., Delhi, Delhi Library Association, 1964.

The directory consists of the following four parts:

(*i*) Libraries with detailed information; (*ii*) Reading rooms and small libraries; (*iii*) Libraries without full information (these are those about which detailed information could not be collected); (*iv*) Who's who.

In first part, detailed information is provided as given below:

Name of the library, parent organization, address, date of establishment; nature of collection or subjects covered; number of books, periodicals, other materials, annual addition; scheme of classification, catalogue code used; services provided, annual circulation, working hours, closed days, name of librarian, telephone number, number of professionals, semi-professionals and non-professionals.

In part II, names and addresses of reading rooms and small libraries have been provided. Part III contains names and lists of libraries about which information was not received (These are neither reading rooms nor small libraries). There is detailed index at the end, which provides approach through names of persons, libraries and the subject of specialization.

This is a directory, which needs to be revised at the earliest because the information is dated.

Directory of libraries in Delhi, compiled by Surender Kumar, New Delhi, Sterling, 1973.

It covers 322 libraries in Delhi excluding school libraries. For most of the libraries, following information has been included:

Name of the library, year of establishment, address, name of librarian, whether open to public or not, sponsoring or supporting organization, subject or language of specialization, annual book budget, number of volumes, scheme of classification, staff strength—professional and non-professional and contemplated expansion plan.

At the end, an index has been given grouping libraries by their field of specialization.

This directory provides more up-to-date information than DLA's *Directory of libraries and who's who in library profession in Delhi.*

912 Research Institutions

Directory of educational research institutions in the Asian region, 2nd ed., Bangkok, Unesco Regional Office for Education in Asia, 1970.

It has been brought out by the Unesco Regional Office for Education in Asia "as a part of its programme of providing information and clearing-house services in educational research." It covers 170 institutions in the area of educational research. The term educational research has been used with a broad connotation to include both "developm. ·" and "dissemination."

The information contained in this work was obtained from returns o an information schedule addressed to governments and institutions.

The entry for each institution provides information about name, address, designation of the head, year of foundation, administrative status, principal sources of funds, size of staff, aims and functions, departments/units, list of selected research projects (completed) and selected research projects (in progress), journals/periodicals, list of selected publications, summary of selected studies. The institutions are listed country-wise. At the end, index to educational research projects in Asia has been given.

This is a reliable work, which is a mine of information. This is a valuable work for educational planners and researchers in the field of education.

Directory of scientific research institutions in India, Delhi, Indian National Scientific Documentation Centre, 1969.

This directory provides basic information about 913 institutions devoted to scientific research and development. Information from 768 units had been obtained through a questionnaire and information about 145 institutions was collected from secondary sources. It is claimed that this directory covers 90 per cent of the major R & D efforts. The institutions covered include laboratories, research institutes, centres, bureaus, experimental stations, foundations, government departments, university science departments, centres of advanced study, colleges and industrial establishments having separate R & D departments.

Each entry contains information about name of the institution, address, telephone, gram, the year of establishment, the component of research staff, the budget, the strength of the library collection, the divisions and field stations attached to the institution with the names of those in charge, history of the institute, aims and functions, achievements, fields of research, special facilities, and the publications issued by the institute. Date of return of questionnaire is mentioned at the end of each entry.

"The entries in the directory have been arranged according to major complexes as given in the contents page. The complex begins either with a write-up of its overall controlling body or with a general write-up of its organization and structure. Each complex has its own individual contents page listing the institutions in the order in which they appear." In the beginning an alphabetical list of institutions covered is given. Name index, index of periodical publications and subject index have been provided. Name index includes entries for all the heads of the institutions and the divisional heads. The subject

index provides information about fields of research/divisions, special equipment and other facilities, significant items of achievement and some important and special functions. This is a significant reference work, which is reasonably reliable and accurate.

913 Universities

American Universities and Colleges, 11th ed., Washington, D.C., American Council on Education, 1973.

This is an authoritative source of information on higher education including professional education giving description of all colleges and universities offering a bachelor's or higher degree. It covers 1441 educational institutions, giving information regarding enrolment, fees, student aid, admission requirements, number and rank of faculty in each department, and graduate programmes. Aspects of student life and college community are also described. Plenty of statistics are given.

Commonwealth universities yearbook; a directory to the universities of the Commonwealth and the handbook of their Association, 1974-, London, Association of Commonwealth Universities, 1914-, annual.

This yearbook is a conspectus of the calendars of more than 200 universities of the Commonwealth, describing their various activities. It is intended to serve as a directory of the universities of Commonwealth and also handbook of the Association of Commonwealth.

The information for each entry concerning a given university has been provided by the office of the registrar or secretary of the university concerned. This adds to the authoritativeness of the information.

The listing is country-wise. Within each country, further arrangement is alphabetical by name of the university. For each university, the information consists of year of foundation; principal officers; teaching staff, administrative and other staff; constituent, affiliated or associated institutions; general information and statistics.

There is a large name index, which contains the 125,000 names of all the teachers and administrators of Commonwealth universities. This enables a user to locate any individual quickly enough. There is also general (subject) index containing references to institutions, to subjects of study, admission, degree, vacation, courses etc. In addition to this general index, there are indexes to subjects of study (sometimes in the form of table) at the end of most 'national introductions.'

It contains essays or articles to provide "purely factual material into perspective for those who are unfamiliar with the background

to it. There are altogether sixteen such essays in the 1975 yearbook. Eight of them take the form of substantial and wide-ranging 'national introductions' to the sections for countries with more than three or four universities . . . describing the history, constitution and principal characteristics of the universities in that country" (Preface, p. vii). The other eight essays are given in appendix III, related to the same eight countries but deal with one particular topic.

The six appendixes are: (*i*) Former member universities of the Association, (*ii*) Students from abroad in six Commonwealth countries, (*iii*) University admission requirements, (*iv*) Short bibliography, (*v*) Commonwealth scholarships and fellowship plan, and (*vi*) Association of Commonwealth Universities.

Maps and tables for courses have been provided, which add to the usefulness of the work.

It does not always give up-to-date information. 1975 yearbook gives information of 1973 collected in 1974. In some cases, the information has been found to be inaccurate. But this should not distract from value of such a reference book. Fifty-third edition (1976 yearbook) has been published in 4 volumes. The last volume contains a general index and names index. It has been typeset by a computer assisted method. Pattern of contents remains the same as before. The description given here is based on 1975 yearbook.

It will be found extremely useful by persons, who are interested in university organization and the students, who are looking for opportunities for study and research in commonwealth countries. This reference work is a must for university and college libraries.

Universities handbook: India, Delhi, Association of Indian Universities, 1975.

The 18th edition of the handbook contains names, addresses, telephone numbers and other details for 96 universities including the 17 agricultural universities, the nine institutions of national importance (including five Indian Institutes of Technology) and the 10 institutions deemed to be universities in India. For each university, information provided includes name of university, year of establishment, type of university, postal address, telegraphic address, telephone; officers in the university; deans of faculties; introductory note, jurisdiction; library and research facilities; scholarships and fellowships; private studies; academic year, budget estimates; special features; miscellaneous; courses of study; courses and grades; teachers of university; list of colleges; and annual results.

At the end, a useful table has been provided, which indicates medium of instruction and examination at graduate and postgraduate

levels in differentfaculties. The index contains references to subjects and courses at the degree level and for Ph. D. degree.

The information provided is reasonably accurate. The publication is extremely useful for students, educationists and educational institutions.

92 INFORMATION THAT MAY BE LOCATED IN DIRECTORIES

(*i*) Scholarships available for higher education in UK,

(*ii*) Year of foundation of the Royal Society (London),

(*iii*) Names and addresses of universities in Great Britain,

(*iv*) Name of the Librarian, University of Madras,

(*v*) Name of the head of the Department of Physics at Allahabad University,

(*vi*) Name of the teachers teaching library science at Panjab University,

(*vii*) Admission requirements in Australian universities,

(*viii*) Address of FID,

(*ix*) Names of courses offered at the University of Chicago,

(*x*) Total number of books in National Library (Calcutta),

(*xi*) When was Bhaba Atomic Research Centre (BARC) Trombay, Bombay founded,

(*xii*) Names and addresses of booksellers in Delhi,

(*xiii*) Number of universities in India,

(*xiv*) Name of the first university established in India,

(*xv*) List of institutions of higher learning teaching library science in UK,

(*xvi*) Objectives of IFLA,

(*xvii*) Services provided by INSDOC,

(*xviii*) Fields of research of National Physical Laboratory (New Delhi),

(*xix*) Functions of Organization of African Unity,

(*xx*) Titles of periodicals published by American Chemical Society,

(*xxi*) Address of G.K. Hall & Co.

FURTHER READING

Denis Grogan, *Science and technology; an introduction to the literature,* 3rd ed., London, Bingley, 1976, Ch. 6.

William A. Katz, *Introduction to reference work,* 3rd ed , vol. I, New York, McGraw-Hill, 1978, pp. 213-226.

16 CURRENT REFERENCE SOURCES, SOURCES OF STATISTICS, HAND- BOOKS AND MANUALS

1 CURRENT REFERENCE SOURCES

IN a reference library, often, much time is spent on locating infor- mation relating to recent events. Sometimes, the search may prove to be futile due to lack of suitable sources of information in the library or inadequacy of existing sources. The examples of such questions are: Information on Minister of Finance (India), appointed last week; Information on an earthquake, which took place in Iran, a few days back; Age. at which a leading political figure died about two weeks back.

In case of a prominent event which took place recently, one may consult a leading newspaper. If the event is a local one, one should prefer a local newspaper otherwise national or international news- papers may be found more useful. Newspapers should be consulted if one has some idea about the date, within a reasonable range, otherwise search can be difficult.

Publications like *Asian recorder*, *Facts on file* and *Keesing's contem- porary archives* provide news summary of current events of the preceding week. These are excellent sources for locating information relating to current events. The cumulative indexes to these make such sources invaluable for retrospective searches. However, one should keep in view that these services tend to be behind desired schedule. Above all, due to factors of distance and type cf mail used for getting them, these may get delayed. *Data India*, weekly, also serves a similar purpose. It aims to cover significant facts about India's economic and social developments. Information is collected from a variety of sources including newspapers, reports, proceedings, books, etc.

We may mention two current sources brought out on annual basis, namely, *New York Times index* and *Annual register; world events* (New York, St. Martin's Press, 1758-). *New York Times index* is

an index to the newspaper and majority of the entries are in the form of a brief summary. These brief summaries are often found sufficient to provide required information. In case of more information, one can always turn to the original source. *Annual register* primarily deals with those news events which are of international nature and ones relating to Commonwealth. The discursive essays on various aspects of the previous year are given. Reliability is questionable due to rapidity of its compilation. Additional features include provision of lists of public documents, obituaries and chronological list of events. The index is an excellent one.

Indexing periodicals do index recent events but these services refer the user to the original source without providing the information itself such as *Indian press index* (Delhi, Delhi Library Association, 1968-, monthly), *Index to the Times of India*, Bombay, 1973- (Bombay, Microfilm and Index Service, Reference Department, Times of India, 1974-, three times a year). On the other hand, the sources, mentioned in the earlier section provide the information itself.

A few important current reference sources are described below:

Asian recorder: *A weekly digest of Asian events with index*, Delhi, Sankran, 1955-, weekly.

Asian recorder provides weekly news summary of current events happening in all countries of Asia as well as those about Asia happening outside Asia.

It consists of three parts as given below:

(*i*) Events in all countries of Asia listed under each country, arranged alphabetically, with a summary for each if necessary.

(*ii*) Events about Asia happening outside Asia listed under a separate heading—*Asia outside Asia*.

(*iii*) Sport is listed at the end, without consideration for a country.

The special features include the citation of the source from which the information has been taken. These may include newspapers, periodicals, radio, embassies or government departments. Every three months, an index is issued. Besides, annual index is also brought out. The index is quite intensive and there are many *see also* references listed in the index. A cover binder is made available by the publisher for the insertion of each issue.

This is an extremely useful source of current events. This is highly recommended for Asian libraries, especially useful for Indian libraries because it gives greater attention to Indian events.

Data India, New Delhi, Press Institute of India, 1976-, weekly.

Data India covers significant facts about India's economic and social developments. National affairs are covered first, followed by state by state coverage.

Information is provided under the following headings:

Agriculture, education, energy, finance, food, foreign trade, industry, science and technology, strikes and lockout, planning, housing, natural resources, town planning, company affairs, foreign aid, manpower, population, transportation, etc.

The significant facts included in *Data India* are collected from the following sources:

Over 30 daily newspapers; journals; government and non-government reports; trade chamber bulletins; parliamentary and state legislature papers and proceedings; research papers; public sector reports; and books.

The information is collected from above sources and rewritten for *Data India*, covering every sphere of development activity. Sources for each item are cited, giving specific source and date, so that one can consult the original source for detailed description.

The indexes are cumulated on quarterly and annual basis. A tough binder is also supplied by the publisher.

This is an excellent source for significant facts concerning economic and social developments.

Facts on file; a weekly world news digest, New York, Facts on File, October 30, 1940-, weekly.

This work provides precise factual summary of the important facts relating to news events in the form of objective, brief and factual reports. The emphasis is on the news events taking place in the United States and those international events, which have a bearing on American affairs. The information provided is taken primarily from the major newspapers published in the United States and elsewhere.

News items are usually organized under broad subject headings such as world affairs, national affairs, foreign affairs, finance, economics, sports, etc. The arrangement is not fully satisfactory.

Facts on life is fully indexed every two weeks. The index is cumulated every month, every three months, and every year. The detailed indexes help a great deal in overcoming the problems of arrangement of items of information in the weekly issues.

On first page of each issue, it lists this week's news headlines under the headings: world affairs, US affairs, other nations and miscellaneous.

Ephemeral events like sports, arts, or movies are covered in detail

unlike *Keesing's contemporary archives*. One major drawback of *Facts on life* is that it does not indicate the sources of information.

Of various news summary type publications, *Facts on life* is considered to be most prompt. The information provided is considered reliable as a whole. This is a good survey of the important events of the week, giving synopsis of standard news events and providing a great deal of facts.

Keesing's contemporary archives, 1931-, London, Keesing's 1931-, weekly.

This is a weekly record of important world events. Since 1931 it has been covering all important developments in international and national politics and economics. The information in it, "has been gleaned and abstracted from the world's daily, weekly and monthly, press, from information services and official government documentation programmes and other such services. Items which have been determined as established facts have been condensed into accurate reports free of all bias by an experienced team of research editors and have been indexed by a full team of specialists." The emphasis is on Europe and the Commonwealth.

"Keesing's" news sheets are issued on weekly basis. These are numbered consecutively. Every second week, a subject index is issued. The subject index is cumulated on quarterly basis. On completion of a volume, consolidated index is issued. Similarly an index of names is published quarterly and consolidated on completion of volume.

The arrangement is by country, territory or continent with broad subject headings like aviation, fine arts, religion, etc.

Detailed subject reports in certain areas are frequently included. These are prepared by experts. Full texts of important speeches and documents are also given. However, ephemeral events like sports, arts or movies are not covered in detail. For major items, sources of information are indicated. A retrospective run of *Keesing's* is available in microfiche.[1]

This is an excellent tool on international affairs. As references to sources of information are given for major items, therefore, it can prove invaluable for a researcher. Full texts of important speeches and documents greatly add to its usefulness.

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[1]*Keesing's contemporary archives*, 1931-1975, vol. I-XXI, microfiche edition, London, Keesing's, 1977 (Indexes are given at the beginning of each volume),

2 SOURCES OF STATISTICS

21 Introduction

Provision of statistical reference service is becoming increasingly important. It requires adequate knowledge of a large body of sources of information. One should possess some knowledge of how the statistics are collected and processed. One should also be aware of kinds of data covered by these sources.

The problem of terminology exists due to changing vocabulary, however some standardization is beginning to take place. The question of reliability also matters. Statistics need not be exact but these should approximate the true value. In order to determine the degree of reliability of a particular data, one must find out the methods used for collecting data.

The number of sources of statistics is extremely large. However, it is not necessary that one should be able to locate any kind of statistics. It is just possible the same may not have been collected so that the question of availability would not arise in such cases.

As a reference librarian, he should give a word of caution to the unwary users about the reliability of statistics or direct him to critical sources to make intelligent use of such data.

A reference librarian should use the whole of his collection to locate statistics. In this connection, one should remember that general reference sources are sometimes extremely good and a proper use should be made of these. A brief description of usefulness of various kinds of reference sources is given below:

Bibliographies and Indexes. These are useful for locating books on statistics and statistical methods. Indexes often lead to suitable sources of current statistics, e.g., *Bulletin of the Public Affairs Information Service.*

Dictionaries. These very often provide population statistics. Sometimes, other kinds of statistics may appear as an appendix.

Encyclopaedias. These usually provide socio-economic data about large geographical areas, which may be up-dated by their yearbooks.

Biographical sources. These provide vital statistics relating to dates of birth and death, sex, age, address, occupation, number of children, etc.

Almanacs. These are most often used as ready reference sources for locating statistics. These extensively use government statistical publications as source of information, providing reference to original sources. These cover wide range of subjects and indexes to these are quite detailed. But often the statistics provided are not the most

recent ones.

Statistical yearbooks. These are far more useful than almanacs. These specialize on statistical data, leaving out miscellaneous information. Very often, statistics provided in a single volume may cover a longer period of time, which can be helpful for a comparative study.

Atlases. There are a number of atlases, which specialize in economic statistics. Some of the atlases provide useful data on population, communication, climate, vegetation, agriculture, minerals, etc. For instance, *Rand McNally commercial atlas and marketing guide* is an excellent source for current statistics.

Periodical publications. There are a large number of periodical publications issued by governments, trade organizations, professional bodies, which provide excellent socio-economic statistics on current basis. *Monthly abstract of statistics,* 1948- (Delhi, Manager of Publications), *Monthly bulletin of statistics* (New York, United Nations Statistical Office) are good examples. *Ulrich's international periodicals directory* provides a long list of such periodicals. Such periodicals are indexed in a number of indexing periodicals, e.g., *Public Affairs Information Service* which is described below:

Bulletin of the Public Affairs Information Service (PAIS): a selective subject list of the latest books, pamphlets, government publications, reports of public and private agencies and periodical articles..., 1st-, New York, Public Affairs Information Service, 1915-, vol. 1-, weekly, with annual cumulations.

PAIS is an authoritative indexing service, compiled by a Committee of American librarians. It is an index to publications in all forms relating to public affairs by which is meant, roughly, any political social or economic topic that relates to matters of public discussion or policy. Over a thousand periodicals published in English throughout the world are covered on a selective basis.

As it is a selective subject list of latest materials, it serves as an excellent source for current statistics. Statistics are indexed under subject, with subheading *statistics.*

A few examples of sources of statistics are described below:

22 International

Demographic yearbook, 1948-, New York, United Nations Statistical Office, 1949-, annual.

This yearbook provides vital statistics about nations of the world, including birth-rate, deaths, area, population and population movements.

Europa yearbook, 1959-, London, Europa, 1959-, 2 vols, annual.

The first volume covers organization, functions, and history of leading international organizations and the countries of Europe. The second volume is devoted to countries of Africa, the Middle East, North and South America, and Asia. It aims to provide general statistics and information on publishers, radio and television, trade and industry, finance, transportation, government, the constitution, religion, insurance, etc.

Statesman's yearbook; statistical and historical annual of the states of the world, 1864-, London, MacMillan, 1864-, vol. 1-, annual.

This yearbook provides statistics on governments of the world. A bibliography is given for each country, which lists statistical as well as other reference works.

Statistical yearbook; Annuaire statistique, 1948-, compiled by United Nations Statistical Office, New York, 1949-, annual.

Provides a summary of international data for various countries of the world covering agriculture, finance, manufacturing, transportation, trade, population, education, etc. The data is given in the form of tables usually covering a number of years.

The arrangement of data is by subject. The statistics on a given subject for different countries are given side by side so as to allow comparison of statistics for various countries over a period of time.

The data is collected from official sources, checked and rechecked by experts. Therefore, the data should be considered authentic.

Provides official statistics, giving citation to sources used.

This work provides an overall picture of the conditions prevailing in various countries of the world. It becomes possible to compare the conditions between different countries. There are certain countries which do not publish their statistics or bring these out rather late. In such cases, *Statistical yearbook* serves as a boon. There are instances, where this work may be the only source for statistics relating to a given country.

This annual is updated by *Monthly Bulletin of Statistics, 1947-*, New York, United Nations Statistical Office, 1947-, monthly.

This is an excellent work, invaluable for international statistics on special areas and also in the matter of currency.

Whitaker's almanack, London, Whitaker, 1869-, annual.

This is a good source of worldwide statistics. However, greater emphasis is laid on statistics about British Commonwealth. This almanac possesses a detailed index.

World almanac, and book of facts, 1868-, New York, World-Telegram, 1868-, vol. 1-, annual.

It contains statistics on a variety of subjects like social, industrial,

financial, political, educational, religious and such other subjects.
Sources for many of the statistics are also provided.

23 *National*

231 INDIA

Census of India, 1971, Registrar General & Census Commissioner,
India, 1971-.

India's first census on all-India basis took place in 1872 followed
in 1881, 1891, 1901, 1911, 1921, 1931, 1941, 1951, 1961 and 1971.
Prior to 1947, census covered Pakistan also.

This publication contains census data, which is made up of 30
series, the first series covering the All India publications and the
remaining series one for each state and union territory. Each series
consists of parts and sub-parts to cover the different types of tables
and reports such as Part I Census general report, Part II Census
tables and on population, Part III Establishment reports and tables,
Part IV Housing report and tables, Part V Special tables and ethno-
graphic notes on scheduled castes and scheduled tribes, Part VI Town
directory, survey reports on towns and villages, Part VII Special re-
port on graduates and technical personnel, Part VIII Administration
report (for official use only), Part IX Census atlas, Part X District
census handbook, Miscellaneous (special papers such as language
survey reports, age tables, life tables, etc).

Not merely the population figures, but other data regarding demo-
graphic studies and information on social, ethnographic, religious,
and other aspects of Indian people are given. Descriptive and statis-
tical reports issued by Central government and state governments are
highly useful. District handbooks, village monographs, special papers,
etc., provide tremendous amount of information. Plenty of maps and
tables are given in these publications. *Census of India, 1971* serves as
a rich source of data about Indian people. The publication pro-
gramme for 1971 census has not yet been completed. Similar publi-
cations exist for previous census.

Kothari's economic and industrial guide of India, Madras. Kothari,
1976.

The thirty-first edition serves as a reference work, which describes
industrial and economic development, the rules and regulations
governing industrial activity, the policy changes in relation to business
and industry, etc. Thus it gives economic background of India and
the progress made in private and public sectors covering essential
aspects of Indian economy. Provides useful brief surveys of various

industries and gives useful data for a number of years.

Monthly statistics of the foreign trade of India (New Delhi) comes out in 2 parts (Part I Import, Part II Export).

National sample survey, twenty-third round July 1968—June 1969, number 218, National Sample Survey Organisation, Government of India, irregular.

Number 218 gives tables with notes on small-scale manufacture in rural and urban areas. Each issue deals with a different topic.

Reserve Bank of India bulletin, 1974-, Bombay, Reserve Bank of India, 1947-, monthly.

Statistical abstract, India, 1947, Central Statistical Organization, Ministry of Planning, Government of India, 1975, annual.

This issue is 20th in the new series of abstract relating to 1974. It gives national aggregates for 1950-51, 1955-56, 1960-61, 1965-66 and for each subsequent year up to 1973-74. Statewise information is presented for the latest year. It gives statistics about population, climate, agriculture, irrigation, animal industry, forest industries etc.

This serves as an important source material for authentic data on different sectors of the Indian economy. However, the publication is late by 2 years.

Similar publications covering individual states are brought out on annual basis, such as *Statistical abstract, Uttar Pradesh.*

232 USA

Rand McNally commercial atlas and marketing guide, Chicago, Rand McNally, 1876-, annual.

This is an excellent source for current statistics, though limited mainly to the United States of America. This is a remarkable work especially for statistics on smaller geographical areas like US cities and countries. An important feature being that it is revised annually, recording accurately changes which have taken place.

Statistical abstract of the United States, 1878-, Washington, Govt. Printing Office, 1879-, vol. 1-, annual.

This is a single volume standard summary of statistics found in the census publications concerning all phases of American life covering political, social, and economic data of the United States. It also covers statistics relating to population, education, vital statistics, prices, and metropolitan areas.

It includes a subject guide to statistical sources, both governmental and non-governmental. It also contains a list of publications of recent census, and a guide to statistical abstracts. Thus this work not only provides statistics of national importance but also serves as

guide to further information.

3 HANDBOOKS AND MANUALS

A handbook is a compilation of miscellaneous information in a compact and handyform. It may contain data, procedures, principles, etc. Tables, graphs, diagrams and illustrations are provided. Scientists and technologists use handbooks in their fields rather frequently.

In common practice, a manual is an instruction book, which provides instructions as how to perform a job or how to do something by means of specific and clear directions.

Very often, the terms handbook and manual are used without a distinction. For the evaluation of these sources, one should keep in view, authority, scope, method of compilation of data, accuracy, recency and format.

A few examples of handbooks and manuals are described below:

Engineering mathematics handbook, by J.J. Tuma, New York, McGraw-Hill, 1970.

This contains definitions, theorems, formulae, tables from different fields of mathematics including statistics. This is a work, which is comprehensive and highly useful for an engineer. The information has been provided in a readily accessible form.

Famous first facts, by Joseph N. Kane, 3rd ed., New York, Wilson, 1964.

This work tells about famous first facts recording first happenings, discoveries and inventions .in the United States. The material is arranged alphabetically by subject. There is a detailed index, which satisfies the approach to the facts geographically, chronologically and by personal name.

This reference work is of general interest to everybody. However, it is invaluable to researchers, who intend to establish a given fact.

Handbook of chemistry, compiled and edited by N.A. Lange, revised 10th edition, New York, McGraw-Hill, 1967.

This is a reference work, which provides chemical and physical data required for laboratory work and manufacturing. It contains great amount of data arranged so that it can be located readily. It is especially valuable for a student of chemistry and a professional chemist.

Historian's handbook, a descriptive guide to reference works, by H.J. Pouton, Norman, University of Oklahoma Press, 1972.

This handbook presents a comprehensive listing and discussion of

the finding aids available to historians. It covers a wide variety of major reference works in history along with important works in allied disciplines.

Rockhound's manual, by G.S. Fay, New York, Harper & Row, 1972.

Rockhounding (collecting gems and minerals) is a popular hobby. It describes every aspect of rock collecting, identification, storage, and use. This is a 'how to do' kind of work. Provides tables and detailed directions as to how to identify the gemstones and minerals.

4 INFORMATION THAT MAY BE LOCATED IN

41 Current Reference Sources

(i) Summary of news about bomb explosion, which killed L.N. Mishra (Minister of Railways, Government of India).

(ii) Summary of news about relations between Bangladesh and India during 1976.

(iii) News summary of Agricultural Prices Commission's (India) recommendations (1975).

(iv) Development of Bauxite in Ghana (1974): A summary of news.

(v) Results of general elections to the Lok Sabha (India) held in April 1977.

(vi) Brief summary of Sarkaria Commission's report (India) 1977.

(vii) Summary of news about trial of Bhuto (ex-Prime Minister of Pakistan).

42 Sources of Statistics

(i) Number of books published in India in 1975.

(ii) Net area under irrigation in the States of Indian Union in 1978.

(iii) Average yield of principal crops in India.

(iv) Population of Meerut district.

(v) Number of states and districts in India.

(vi) Number of daily newspapers published in UK.

(vii) Number of foreign tourists, who visited France in 1978.

43 Handbooks and Manuals

(i) Who invented tooth brush?

(ii) Who was the first man to jump off the Brooklyn Bridge?

(iii) Who invented can opener?

(*iv*) Who was the first person to be conferred Doctor of music in United States?

(*v*) Date of the laying of cornerstone of Capital of the United States.

(*vi*) Melting point of copper.

(*vii*) Properties of sulphuric acid.

(*viii*) Density of gold.

(*ix*) Formula for calculating illumination of surface.

(*x*) Formula for calculating correlation between two variables.

(*xi*) How to identify gems?

(*xii*) Formulae for normal distribution density function (Gaussian function), harmonic mean, Pearson correlation coefficient.

(*xiii*) How to transplant roses?

FURTHER READING

Frances Neel Cheney, *Fundamental reference sources*, Chicago, American, Library Association, 1971, Ch. 6.

Denis Grogan, *Science and technology; an introduction to the literature*, 3rd ed, London, Bingley, 1976, Ch. 5.

Margaret Hutchins, *Introduction to reference work*, Chicago, American Library Association, 1944, Ch. 8, pp. 64-65.

William A. Katz, *Introduction to reference work*, 3rd ed., vol. I, New York, McGraw-Hill, 1978, Ch. 6.

17 SYSTEMATIC BIBLIOGRAPHY

0 BIBLIOGRAPHY

THE term "bibliography" was first used by Louis Jacob de Saint Charles in his *Bibliographia Parisiana* (1645-50), and became popular in the eighteenth century. It is derived from two Greek words, "biblion" and "graphein." "Biblion" means "books"? and "graphein" is "to write." Thus, etymologically bibliography means the writing of books. This is the original meaning given in the *Oxford English Dictionary*, which prevailed during the seventeenth century. Thus, bibliography was originally defined as the writing (in the mechanical sense) and transcription of books.

Currently, in our context, bibliography is considered "as the technique of systematically producing descriptive lists of written or published records (especially books and similar materials)," and is defined "as such a list, so produced,"[1] and is supposed to give sufficient detail to fulfil its aim.

Strictly speaking, it is a complete and uncritical list and is not intended to include critical comments. In actual practice, the question of a bibliography being complete in respect of defined boundaries or limitations is not achieved fully due to economic factors and other reasons In the strictest sense, a reading list is not a bibliography but in practice it is undesirably termed a select bibliography.

1 BRANCHES OF BIBLIOGRAPHY

We may recognize three branches of bibliography, namely: (*i*) Systematic or enumerative bibliography, (*ii*) Analytical or critical bibliography, and (*iii*) Historical bibliography. In this book, we shall confine ourselves to systematic bibliography only.

[1]UNESCO/Library of Congress Bibliographical Survey, *Bibliographical services, their present state and possibilities of improvement*, Washington, 1950, p. 1.

11 Systematic or Enumerative Bibliography

110 DEFINITION

Whenever a layman or an average librarian speaks of bibliography, he usually means systematic or enumerative bibliography. It is certainly the easiest of all aspects of bibliography to understand. The examination of individual books in order "to assemble the resulting entries, simple or elaborate as the case may require, into logical and useful arrangements for reference and study"[2] is called systematic bibliography. In simple words, the straightforward listing of individual items with minimum details is known as systematic bibliography.

This requires the adequate listing of records of knowledge in all forms, covering published and unpublished material. The object of a systematic bibliography is to collate and list information about individual books and related material in a logical or useful order. Such a bibliography is usually enumerative, which means that some sort of selection has prevailed in determining what to include.

111 IMPORTANCE

Systematic bibliography is basic to other areas of bibliography because the prerequisite for studying a book is that its existence be known. This we can determine through systematic bibliographies.

112 RELATIONSHIP TO ANALYTICAL OR CRITICAL BIBLIOGRAPHY

Enumeration in a systematic bibliography involves examination of a given book so that a bibliographer is able to get enough fundamental information regarding author, title, edition, year of publication, place of publication, publisher's name, etc. These basic facts are required for the preparation of entries. In order to determine these basic facts, a bibliographer compiling a systematic bibliography has to depend upon an analytical or critical bibliography.

113 FUNCTIONS

The basic function of a systematic or enumerative bibliography is a purely recording one. Therefore, the recording function must be distinguished from the selecting function. The selecting function involves critical evaluation of the subject content that only a subject specialist is capable of doing. On the other hand, a systematic or

[2]Arundell Esdaile, *Student's manual of bibliography*, revised by Roy Stokes, New York, Barnes and Noble, 1954. p. 32.

enumerative bibliography should be complete and non-critical in its approach. Of course, selection in systematic or enumerative bibliography involves accepting those items for inclusion, which fall within the scope of the topic concerned or meet the purpose for which the bibliography is being compiled.

114 TYPES

Commonly recognized types of systematic bibliography are enumerated below:

Universal bibliography (including printed catalogues of great national libraries) (e.g., *Bibliotheca universalis*).

National bibliography (e.g., *Indian national bibliography*, *British national bibliography*).

Trade bibliography (including book trade records and catalogues, e.g., *Cumulative book index*, *Indian books in print*).

Selective or elective bibliography (e.g., *World's best books*).

Incunabula or book rarities bibliography (e.g., *Index to the early printed books . . . by Robert Proctor*).

Bibliography of anonymous and pseudonymous works (e.g., *Dictionary of anonymous and pseudonymous literature* by S. Halkett and J. Laing).

List of periodicals (including list of current periodicals, lists of retrospective periodicals, location and finding lists, e.g., *Ulrich's international periodicals directory*).

List of theses, dissertations, etc. (e.g., *Indian dissertation abstracts*).

Subject bibliography (including indices and abstracts, e.g. *Library literature*, *Bibliography of Chaucer*).

Author bibliography (e.g., *Chaucer; a bibliographical manual*).

Bibliography of bibliographies (e.g., *Bibliographic index*, Besterman's *World bibliography of bibliographies*).

Sometimes a bibliography may be referred to as current bibliography or retrospective bibliography. The term current denotes most recent. This term has to be considered in the content where used. A trade bibliography may be late by 3 years but it may still be current due to the fact that nothing more recent may be available.

115 PRESENT SITUATION

Systematic bibliography is one area where the greatest amount of work has been done. However, due to the increase in literature being published, systematic bibliography has not been able to handle its processing adequately. We can hopefully expect better results following the availability of mechanization of the processes. In any

case, systematic bibliography is better organized than before to make known those documents whose existence is confirmed. But, we are far away yet from universal bibliography.

116 CONCLUSION

The existing forms of systematic bibliography vary a great deal with regard to scope, coverage, arrangement, periodicity, format, etc. This often creates a confusion in the mind of a user.

12 *Analytical or Critical Bibliography*

An analytical or critical bibliography involves "investigation of the physical nature of the book which can be, and frequently is, sufficiently exhaustive to enable all the circumstances of the book's manufacture and history to be revealed."[3] Each bibliographer develops critical evaluation in his own way and each book is likely to reveal a different kind of evidence.

In order to describe the given volume of a book, a bibliographer finds out which work or works the given volume of a book contains, which edition it is and whether it is a perfect copy. Thus analytical bibliography deals with a physical description of the book. In case a book does not give the required facts on its face, then much research will have to be carried out to establish satisfactorily, information about the authorship, edition, date, place of printing and perfection of the copy.

The basic purpose in describing books, as mentioned above, is to be able to prepare entries individually, which can then be assembled rationally for systematic listing.

Analytical bibliography has an important relationship to descriptive cataloguing and the history of the book.

121 DESCRIPTIVE BIBLIOGRAPHY

This is the end product of analytical or critical bibliography. "Its function is primarily that of recording the bibliographic detail of a book which has been established during the process of analytical bibliography."[4] Due to the recording function, it has some relationship with enumerative bibliography but the difference lies in different purposes as well as in the degree of bibliographic detail required to record a document.

[3] Roy B. Stokes, "Bibliography," *Encyclopedia of library and information science*, New York, Dekker, 1969, vol. 2, p. 413.
[4] *Ibid.*, p. 414.

Descriptive bibliography is also the application of analytical bibliography to the physical form of the book. The bibliographical aspects of a book are given in the kind of detail unnecessary for an enumerative bibliography. In the latter, the bibliographic details are kept to a minimum because the basic purpose is listing. Extra details would make the consultation of enumerative bibliography difficult. Descriptive bibliography aims to describe an ideal copy of any particular edition, describing all variations from this ideal norm. An ideal copy is a perfect copy of the book, as intended by the printer or publisher for final issue. In this regard, in enumerative bibliography, the bibliographer describes a specific copy whether or not the given copy is a perfect copy or a true representative of the edition as a whole. Due to the standardisation of book production the importance of descriptive bibliography has decreased greatly.

122 TEXTUAL BIBLIOGRAPHY

This is the end product of analytical or critical bibliography. It is the application of analytical bibliography to the contents of books. It is a bibliography applied to textual studies. The chief purpose of such a bibliography is to determine the effect of writing or the printing process on the correctness or completeness of a text. It helps to ascertain the variety of authorship, edition, etc. Thus textual bibliography deals with textual variations between a manuscript and the printed book or between various reprints or editions.

An analytical bibliography is concerned more with the physical aspects of the book, whereas textual bibliography is more interested in the author's words and tries to determine the exact words that the author intended should constitute his work. The aim is to prepare definitive editions of the original authors.

We can say therefore, that textual bibliography is an area which seems to be of great importance for literary critics rather than librarians or bibliographers.

13 Historical Bibliography

The study of books "as objects of art" may be termed a historical bibliography. It is concerned with the art of writing, printing, illumination and binding.

According to Stokes, "It is difficult to look critically at a late sixteenth century play, a late seventeenth century sermon, an eighteenth century plate book, a nineteenth century novel or a twentieth century periodical, without some understanding of the state of printing office, the position of the author and the publi-

sher, the channels of book distribution and the general social and cultural climate of the time."[5] Thus historical bibliography makes an attempt to achieve a broad understanding of the milieu of the book in the context of the world of books, and social and cultural conditions in existence at the time.

2 ART OR SCIENCE OF BIBLIOGRAPHY

There are varying definitions of a bibliography. Some emphasise its close relationship to science and others, its closeness to art. As a result, some consider it a science and others regard it as an art. Esdaile rightly says, "bibliography is an art and also a science."[6] He argues that, "The art is that of recording books; the science, necessary to it, is that of the making of books and of their extant record."[7]

Analytical and historical bibliographies lend themselves to scholarship. These two areas of knowledge have achieved a status and prestige for themselves, and have an important place in the world of scholarship.

Descriptive bibliography, which is an application of analytical bibliography is a science. It is based on definite principles, which can be applied in practice.

Systematic bibliography is rather an art. This art lies in presentation. Once bibliographic details for entries have been collected, the entries are arranged systematically for reference and study. In this respect a bibliography is an art.

Many people term systematic bibliography, bibliography, whereas the rest are regarded as book sciences, the book order or bibliology.

Whether the subject of bibliography is considered an art or a science is of little consequence. The fact remains that a bibliography is a valuable tool both in the hands of a reference librarian, and other users, especially scholars. It helps reference librarians to give the right kind of service to a user. Its importance and value can be realized from the fact that it assists scholars in extending the frontiers of knowledge and has great practical utility as well.

3 DOCUMENT BIBLIOGRAPHY

"Document" is "embodied thought," which is a "record of work on

[5] *Ibid.*, p. 418.
[6] Arundell Esdaile, *op. cit.*, p. 17.
[7] *Ibid.*, p. 17.

paper or other material, fit for physical handling, transport across space, and preservation through time."[3] Thus, documents refer to printed, handwritten and engraved material, including books, periodical publications, microfilms, photographs, gramophone records, taped records and others, and the term has been so used in this book.

According to the late S.R. Ranganathan, bibliography has different meanings, depending upon the qualifier used. Where it is "dominantly associated with the soul (idea content) of books," he terms it "document bibliography," and explains it further by saying that it is "a list of embodied macro and/or micro ideas—that is, of books and/or of articles in periodicals—on a specialised subject or on any number or on even all the subjects; it may be restricted also in other ways. . . . When it is prepared so as to meet the requirements of advanced specialists, it is called 'Documentation List.' The term 'Document Bibliography' may also mean the art of preparing such a list."[9] This term is extremely suitable. The concept of a document bibliography explained above is clear enough, but the idea of such a list being a systematic one, produced systematically, needs to be emphasized. The manner in which it is organized is of great importance.

4 DEVELOPMENTS

Early bibliographies were mostly publishers' trade lists of books, and in libraries, a few catalogues of books were available. The next important step was the compilation of regional catalogues called *Messkataloge* (fair catalogue) in the second half of the sixteenth century. It was during this period also that Konrad Gesner attempted to list all scholarly publications in the world, and the *Bibliotheca universalis* appeared in 1545. National bibliography developed further during the seventeenth century. About the middle of the seventeenth century, descriptive notes began to be appended to the list of books. Subject lists of books became quite common about this time. Towards the beginning of the eighteenth century critical bibliographies also came to be compiled, and subject book lists covering one or more subjects became rather common by the middle of the century. While the listing of periodical articles had become quite

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[8] S.R. Ranganathan, *Classified catalogue code with additional rules for dictionary catalogue code*, 5th ed., Bombay, Asia Publishing House, 1964, p. 132.
[9] S.R. Ranganathan, *Physical bibliography for librarians*, 2nd ed., Bombay, Asia Publishing House, 1974, p. 21.

common towards the close of the nineteenth century, subject bibliographies listing books and periodical articles were common only during the twentieth century. All the same, Gesner's aim of achieving a complete listing of all the scholarly publications in the world still remains a dream.

5 IMPORTANCE

There was a time, in the past, when it was possible for a scholar to keep himself up-to-date and well-informed on current literature in his field of interest. But due to the increase in the amount of literature being available, it has become more and more difficult for him to do so. But for bibliography, even a scholar faced with such a vast amount of literature would lose his way, wasting much time before he is able to read even a part of what he is required to study.

Quick and easy access to information is vital to the development of various fields of knowledge. Therefore, it is essential that relevant information be brought to the attention of professionals, administrators and researchers who have urgent need of it. In this respect, bibliography plays an important role.

No modern library can function without bibliographical tools like bibliography. It contributes towards the use of books and other materials, thus further promoting the useful application of knowledge. We can go to the extent of saying that science would not be able to advance but for the existence of bibliography. Bibliography is, therefore, of fundamental importance and forms basic material in any reference collection.

6 AIMS

The basic aim of a bibliography is to assist the user in locating the existence of or identifying a book or any other material which may be of interest to him. In the case of a researcher, a bibliography enables him to find out what has already been written on his subject and allows him to keep himself well-informed and up-to-date. This avoids duplication in research, saving him both time and money. The secondary aim of a bibliography is to serve as a tool for book selection, the identification and verification of bibliographic details, location of material (in terms of place of publication, location in the library or point of purchase. More often a reader is concerned with what is available on a given subject in various forms). However, the efficacy of a bibliography depends upon the agency producing it.

There is a variety of bibliographies, differing a great deal in their aims.

61 *Finding the Existence or Identification of Documents*

A scholar may know of a document but in order to verify its existence, he has to depend upon a bibliography, which will also assist him in identifying the documents. This is achieved by giving sufficient bibliographic details, like the full names of authors and collaborators, complete title, edition, place and year of publication, publisher's name, notes, etc., so as to distinguish one work from another.

62 *Book Selection*

The very purpose intended to be served by a bibliography would indicate the value of document included in it to a given type of user. This is done by adding a note to each document being listed. A subject bibliography would indicate what is available on a given subject. Similarly an author bibliography would indicate an author's previous publications and so on.

63 *Verification of Bibliographic Details*

In order to identify or verify bibliographic details one has to depend on bibliographies. A good practice is to start with general bibliographies and pass on to specialized ones.

64 *Location of Materials*

A user may know what he requires but he may not know whether it exists or where he can find it. For this purpose, a bibliography in the form of a published library catalogue, printed trade list or union catalogue can give the necessary information on where to obtain his material.

7 EVALUATION OF BIBLIOGRAPHY

70 *Introduction*

Bibliography, index to periodicals and abstracting periodical are different kinds of reference sources. In order to make the best use of these sources, it is essential to acquire a thorough understanding of them. This can be achieved to a large extent by evaluating such sources, and laying down criteria for their evaluation.

The checklist for the evaluation of a bibliography for the purpose of its study should consist of authority, scope, arrangement, entries and items of information, revision and up-dating including cumulations, special features, drawbacks, format and conclusion.

71 *Authority*

The work should be authoritative. In other words, it should be accurate and dependable. The authoritativeness of a bibliography can usually be judged on the basis of the reputation of the sponsoring body (if any), publisher, distributor, author or compiler. In this regard, it is useful to know the subject, and the academic and bibliographic qualifications of the author or compiler.

In the case of a trade bibliography, the question of authority may become meaningless if no other publisher intends to attempt another bibliography in that field. For example, this is certainly the case with publications like *Cumulative book index, British books in print*, etc.

72 *Scope*

The scope of a bibliography can be understood properly by finding answers to the following questions:

What is the purpose of the work as stated by the compiler himself?

What are the limitations with regard to subject, kinds of materials, language, place, time, etc?

Find out whether it is comprehensive or selective, current or retrospective.

73 *Arrangement*

Arrangement is of utmost importance. A bibliography, howsoever authoritative, is useless unless information can be located easily and quickly. Arrangement should be such as to encourage rather than discourage the use of bibliography.

A good bibliography should allow approach by subject, author and sometimes by title, by geographical area (if thought necessary) or any other suitable item. This can be achieved by providing a variety of entries. As regards arrangement there are a number of possibilities:

Alphabetical by author, subject, publisher or geographical area, etc., or any such combinations.

Dictionary-wise, where author, title and subject entries are merged together in a single file.

Classified arrangement, where subject entries are arranged according to some scheme of classification. An alphabetical index consisting of author, title, cross-references, series and subject entries is a must.

Alphabetico-classed is that type of arrangement where either the major subject divisions are arranged in a classified order and sub-

ordinate subjects within major divisions in the alphabetical order, or the major subject divisions are put in alphabetical order with subordinate subjects arranged in classified sequence. Suppose the major divisions are Mathematics, Chemistry, Botany, Zoology, History, Political Science, Law, etc. These would be arranged in a classified pattern. Within each major division, its subordinate divisions would be arranged alphabetically. Thus, within Mathematics, subordinate divisions like algebra, calculus, geometry, etc., will be arranged alphabetically. In practice, it needs to have an alphabetical index. In this form of catalogue, the combined advantages of both alphabetical and classified forms are aimed at. Similarly, the alternative form of alphabetico-classed catalogue can be obtained.

Annalistic arrangement is that in which entries are arranged by year of publication. This method of arrangement is highly suitable for subjects, where it is essential to trace the development as mirrored in their literature. Thus this arrangement is most suitable for bibliography on an event. For instance, the history of a movement, the war between India and Pakistan (1965), etc.

Chronological arrangement is based upon the period covered by the document itself. For instance, bibliographies on history can be arranged in this manner.

A classified bibliography with indexes is highly useful for a research scholar. A reading list on a subject for the average user of a public library might be arranged alphabetically by author.

74 *Entries and Items of Information*

A good bibliography should provide author and collaborator, subject, series and title entries, as well as cross references. The main entry should give information about author(s), collaborator(s), full title, edition, series, number of volumes (in case of a multi-volumed set), illustrations, bibliographies, imprint, annotation or abstract. The value of a bibliography is enhanced if it includes an annotation or abstract.

Consistency in the matter of provision of entries as well the information which goes into each entry, is an important consideration.

75 *Revision and Up-dating Including Cumulations*

In case a given bibliography is to be kept up-to-date, it must be revised periodically. Cumulation of main entries or indexes can be highly useful. The former would be preferable, but it would raise printing costs tremendously. The application of computers can make it possible to bring out cumulations promptly at a comparatively

cheaper cost than traditional methods of printing.

76 Special Features

Questions as to whether the work is new, the only one of its kind, or unique may be raised. What for instance, is its distinctiveness? This can be ascertained by comparing it with other bibliographies in the same field, which will also highlight any other variations.

How reliable is the work? For this a few items may be checked for accuracy. One can also find out whether certain items which should have been included are covered or not.

Read the preface and introduction —these will also give an idea about the special features of the bibliography.

77 Drawbacks

These include lack of coverage, indexes, cumulations, timeliness (too much time lag), selectivity, analytics, etc.

A bibliography might be too expensive, thus placing it out of the reach of small or medium-sized libraries.

78 Format

Are the headings and subheadings bold enough to stand out clearly?
Are the typefaces clear and legible?
Has a suitable difference been made between different types of headings or not!

791 Conclusion

Conclusion should provide overall judgement about the work. Is the work to be recommended for a library or not? If so, specify the kind of library (small, large, medium, special, public, academic).

8 CONCLUSION

"The basis of all librarianship is bibliographic. It is a profession in which what is recorded, by whatsoever means historical development has permitted, is the foundation of all activity. The enumeration of that material, its analysis, its detailed recording, its history, its authentication are all problems relating to its use, of which no librarian dare be ignorant."[10] This indicates the role bibliography plays in the field of librarianship. It serves as the basis of various activities in this subject and must be given the importance it rightly deserves.

[10]Roy B. Stokes, *op. cit.*, p. 419

The concept of bibliography has changed a great deal. Currently, in our context, it may be considered the technique of systematically producing descriptive lists, such a list being called a bibliography. We have come a long way from early trade bibliographies which were crude in nature. Bibliography forms basic material in any reference collection and is of fundamental importance, this importance is increasing with the passage of time.

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18 NATIONAL BIBLIOGRAPHIES

0 INTRODUCTION

NATIONAL bibliographies have been in existence for nearly four hundred years, but the term national bibliography was put into use about a hundred years ago. National bibliography is an enumerative bibliography. However, this term is a homonym and is difficult to define. It denotes different things to different people. Ideally speaking, a national bibliography should record all documents published or unpublished, irrespective of the agency issuing them, covering trade as well as non-trade items, irrespective of the form of material, language, subject or time of publication. It follows that the totality of bibliographical tools relating to the output of a nation, taken together, go to form a complete national bibliography. In this context even a trade bibliography is one part of a national bibliography, but is more restrictive in nature. However in practice, a national bibliography is restricted in terms of form of material (one or another form of material like books, periodicals, pamphlets, microfilms, etc), time (retrospective or current), geographical area (limited to the country, state, district, city, etc), content (anonymous or pseudonymous works, etc), and origin (agency of issue).

1 USES

It keeps the users well-informed about the literary achievements of a nation.

It helps in the transmission of scholarship and culture to future generations.

It serves as a device for bibliographic control of the literary output of a nation.

It serves as a book selection tool for librarians, scholars and others, and it acts as a guide to the book trade.

2 PRESENT SITUATION

The records of publications of various nations are incomplete. In the case of American, British and German works, existing biblio-

graphies are somewhat comprehensive. However, there is no single source containing all types of material which may be called a complete national bibliography in these countries as well as elsewhere. Broadly speaking, there are different patterns which can be recognized in different countries, representing a great variety, covering different periods, brought out by different individuals or organizations. These vary a great deal in degree of skill, period covered and element of selectivity and purpose. These records of other nations, especially developing countries, are rather unsatisfactory. In some countries, national bibliographies hardly exist at all. However, the situation is improving due to the efforts of UNESCO, as well an awakening by national governments towards the listing of records of their national output.

3 BIBLIOGRAPHIC CONTROL

If we want bibliography to adequately meet the requirements of bibliographic control or organization, then the bibliography must be complete to the extent possible. Thus, it must cover all forms of published communication. In order to achieve this, it is essential that bibliography consists of parts. Each part must limit itself to one specific nation, and then within each part, subparts must keep within increasingly narrow limits of either type or form of material. In ultimate terms, the objective of bibliography must be to achieve a complete listing of recorded knowledge on a national basis and thereby obtain a complete listing for the whole world through cumulations of these.

Once a current and complete national bibliography has been achieved, it can serve as a logical basis of all bibliographic work. It can form a base for other kinds of current bibliographies. In the next stage, an attempt should be made to achieve retrospective, complete national bibliography.

4 INDIA

41 Existing Pattern for National Bibliography

There is no comprehensive current national bibliography. Indian national bibliography is a current national bibliography. It does not claim to include all the publications within its scope and is not brought out promptly. It also does not cover certain types of documents such as maps, films and sound recordings etc. *Accessions list: India* is another useful publication. There is no single comprehensive

retrospective national bibliography. However, there are a number of
trade bibliographies, which serve a useful purpose.

The following pattern may be recognized:

(a) Current national bibliography:

Indian national bibliography and annual bibliographies for each of
the Indian languages.

Accessions list: India.

*Monthly list: Supplement to the catalogue of civil publications of the
Government of India.*

BEPI: a bibliography of English publications in India.

Press in India.

Indian science abstracts (this also lists theses accepted at Indian
universities).

(b) Retrospective national bibliography:

National bibliography of Indian literature, 1901-1953.

*Catalogue of Government of India civil publications [subjectwise
arranged] corrected up to 31st December 1959.*

Indian books in print.

Reference catalogue of Indian books in print.

*Bibliography of doctoral theses in arts and sciences accepted by
Indian universities, 1954-58.*

*Social sciences: a bibliography of doctoral dissertations accepted by
Indian universities, 1857-1970* (similar volumes have appeared for the
humanities, and the physical and biological sciences).

42 Current National Bibliography

Indian national bibliography, quarterly, October 1957—December
1963; monthly. January 1964—. Central Reference Library, Calcutta,
1959—. With annual cumulations. The five year cumulative index to
volumes for 1958-62 is also available.

The *Delivery of Books (Public Libraries) Act, 1954* was a step
forward in the direction of bibliographic control of Indian publi-
cations. Under the Act every publisher in the country is obliged to
send a copy of every book to the National Library, Calcutta and
three other public libraries in India within thirty days from the date
of publication. In 1956 the Act was amended to include in its pur-
view all periodical publications, including newspapers, in the country.
The Act thus made it possible to plan the compilation of a com-
prehensive national bibliography in the 13 Indian languages (except
Kashmiri) recognized by the Indian Constitution, and English.

The task was to be entrusted to the Central Reference Library
to be located at Delhi. Since the project proved to be stillborn,

the task was to be performed at the National Library, Calcutta by the staff of the Central Reference Library, specially appointed for the purpose.

The *Indian national bibliography* (*INB*) appeared as an experimental fascicule in 1957, and the first quarterly pertained to October-December 1957. Subsequently it has been cumulated in annual volumes. The annual volumes have been supplemented by a five-year (1958-62) cumulated index volume, a Sanskrit fascicule cumulated for 1958-67 in two volumes, and an alphabetical list of 4,500 subjects used in the Bibliography. The proposal to bring out cumulated language fascicules has not been very successful due to lack of cooperation by authorities at the state level.

The *Indian national bibliography*, a classified record of current publications published in India, is based on publications deposited at the National Library, Calcutta under the *Delivery of Books Act of 1954*, as amended by Act no. 99 of 1956. At present *INB* is brought out monthly and then cumulated in annual volumes. The following categories of publications are excluded from its purview: (*a*) maps, (*b*) musical scores, (*c*) periodical publications, (except the first issue of a new periodical and the first issue of a periodical under a new title), (*d*) keys and guides to textbooks, and (*e*) ephemeral material. *INB* is a subject list of books published in India in Assamese, Bengali, English, Gujarati, Hindi, Kannada, Malayalam, Marathi, Oriya, Punjabi, Sanskrit, Tamil, Telugu and Urdu.

The bibliography was published initially in two parts (Part I, general publications, and Part II, official publications) and each part had two sections. But after the issue of January 1973, the two parts have been amalgamated. Now there are two sections, namely, c'assified and alphabetical. In the classified section, the entries have been arranged by subject according to the *Dewey decimal classification* scheme supplemented by Colon class numbers assigned at the right hand bottom corner of each entry.

Full bibliographical details are given under each entry in the classified section, which consists of the class number, author's name, full title, place of publication, publisher's name, year of publication, pages, nature of illustrations, if any, size, nature of binding, price, series note and annotations wherever necessary.

Because of the variety of scripts prevalent in this country, it was decided to opt for the Roman script for the bibliography. Names of authors and titles of books in Indian languages are transliterated into Roman script with diacritical marks and then arranged in one

alphabetical order under each class. The language of the book is denoted by symbols given at the left hand bottom corner of each entry.

The publication programme of *INB* is too much delayed. November 1976 issue was received in May 1979. Besides, the same lists a number of publications published in 1973, 1974 and 1975, which shows that a special effort should be made to get the publications in time. Latest annual volume is for 1973. Although it is a national bibliography but it is far from comprehensive. It is estimated that its coverage is not more than 60 per cent.

INB records all publications in regional languages in Roman script. But most Indian readers do not recognize the Roman script and cannot, therefore, benefit from *INB*. Besides, the subscription price is beyond the reach of small libraries. Therefore, separate annual bibliographies for each of the Indian languages in their respective scripts are issued. These are prepared and edited at the Indian National Bibliography unit at Calcutta. The State governments print manuscripts provided by them. This leads to uniformity in standards. However, bibliographies in Indian language scripts are not being issued regularly.

Current bibliographies of works published in the different languages of India are listed below:

Assamese (1959-),
Bengali (1958-),
Gujarati (1958-59-),
Hindi (1958-),
Kannada (1959-),
Malayalam (1958-),
Marathi (1958-59-),
Oriya (1958-59),
Punjabi (1958-59-),
*Sanskrit (1958/62-1963/67-),
Tamil (1958-)
Telugu (1958-)
Urdu (1958-).

*Sanskrit fascicule of the *Indian national bibliography* is in Devanagari script.

Accessions list: India, New Delhi, American Libraries Book Procurement Centre, 1962-, monthly.

The Centre was set up under the Public Law 480 Programme on Overseas Acquisition by American Libraries. Under this programme, the Library of Congress acquires publications from a num-

ber of developing countries of the world for se'ected libraries in the United States. This list covers selected publications from India and there are similar lists for Pakistan, Indonesia, etc.

The list is selective in nature and does not include all publications. For instance, it excludes certain textbooks and Indian editions of current western works. It includes Central and State government publications on a selective basis. Each monthly issue lists new titles and changes in serials. It is highly reliable for currency, accuracy and completeness of bibliographic details.

An annual cumulative volume listing serials was also brought out on an annual basis, till 1975. However, beginning with the 1976 issue, a cumulative list of serials is being issued only quinquennially. This list of serials is extremely helpful. The *Accessions list* is highly useful. In certain ways, it is more useful than the *Indian national bibliography* because it is published promptly and is relatively comprehensive.

India, Publications Branch, *Monthly list: Supplement to the catalogue of civil publications of the Government of India*; monthly. This work, along with *INB* (which also covers government publications) provides a good coverage of current government publications.

Press in India: Annual report on the press compiled by the Registrar of Newspapers for India under the PRB Act, New Delhi, Ministry of Information and Broadcasting, Government of India, 1964-.

Part 2 contains a list of newspapers and other periodical publications. This is considered a useful tool because it is the most comprehensive source of information on periodical publications published in India.

Comments. Out of many sources forming part of the current national bibliography, *Indian national bibliography* and *Accessions list: India* stand out. The *Indian national bibliography* as we have said earlier is a step forward in the direction of bibliographic control. The publication suffers from several handicaps that need to be removed in the first instance. It has been the victim of delayed publication since birth. The transliteration of entries into Roman script from Indian languages is inexcusable in a country where more and more Indian languages are becoming the accepted means of communication at the state level. *Accessions list: India* brought out by the local office of the Library of Congress, Washington, on similar lines has established the practicability of employing several scripts in the same publication.

In theory, the *Indian national bibliography* claims a comprehensive coverage of Indian publications because the publishers are obliged

under the *Delivery of Books* (*Public Libraries*) *Act of 1954* to send complementary copies of all their publications to the National Library, Calcutta. It does not succeed in actual practice because the authorities of the National Library are unable to enforce the Act effectively. They do not have the machinery for the purpose. This lacuna can be substantiated by glancing at *Accessions list: India* which covers the same ground. The Library of Congress is able to acquire a large number of current Indian publications through the purchase of eighteen copies or more from agents located in state capitals and Delhi. The munificence of PL-480 funds has come in handy to the Library of Congress.

There is thus a significant difference in the contents of the two publications. In fact, both need to be consulted for purposes of bibliographical references. *Accessions list: India* also scores in other respects. The time lag in its publication is not so wide. Furthermore, one issue brought out quinquennially is devoted entirely to listing serial publications in India making it a unique record of serials to be found at one place. Both publications supplement each other well and thus should prove to be a bibliographer's delight.

43 Retrospective National Bibliography

National bibliography of Indian literature, 1901-53, New Delhi, Sahitya Akademi, 1962-74, 4 volumes.

There are 60,000 entries in the fifteen languages of India, and English, which are claimed to have been covered on the basis of strict physical verification of each entry. The entries have been made in Roman script and books are classified under the ten headings of the *Dewey decimal classification* for each language. This bibliography, certainly, a very handy source of reference, cannot be recognized as a definitive work because annotations are lacking and no attempt is made to compare different editions of a classic, essential for evaluating a work. The bibliographic entries need to be more exhaustive because, many a time, the information provided is too brief to be satisfying. It uses broad subject headings and lacks a standard system of transliteration, which are its other weak points. The publication, notwithstanding, is a welcome addition to an otherwise barren field.

Catalogue of Government of India civil publications [*subjectwise arranged*] *corrected up to 31st December ,1959*, Delhi, Manager of Publications, 1966.

The above catalogue taken along with annual and monthly supplements provides a somewhat comprehensive coverage of central

·government publications.

Bibliography of doctoral theses in arts and sciences accepted by Indian universities, 1954-58, New Delhi, Inter-University Board of India, and Ceylon, 1961.

Social science: A bibliography of doctoral dissertations accepted by Indian universities, 1857-1970.

The above volume covers social sciences. Similar volumes for humanities and physical and biological sciences have also been brought out. This set is an invaluable tool and provides highly useful information.

Bibliography of doctoral dissertations, 1975-76—: social sciences and humanities, New Delhi, Association of Indian Universities, 1977—, Annual.

Another annual volume dealing · with natural and applied sciences is also being brought out.

Comments. Quarterly lists of materials registered under the *Press and Registration Act, 1867* have been published in most official state gazettes on a regular basis. Though these lists are incomplete, they contain valuable information suitable for purposes of compiling a complete retrospective bibliography.

5 UNITED STATES OF AMERICA

The following is the existing pattern for national bibliography in the USA:

Publishers' Weekly, New York, Bowker, 1872—, weekly.

Weekly record, New York, Bowker, 1974—, weekly.

American book publishing record, New York, Bowker, 1961—, monthly (annual and *Five year cumulative* 1970—1974, 4 vol).

Forthcoming books, New York, Bowker, 1966—, bimonthly.

Subject guide to following books, New York, Bowker, bimonthly, 1967—.

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Books in print, New York, Bowker, 1948—; annual.

Books in print supplement, New York, Bowker, 1973—, annual.

Subject guide to books in print, New York, Bowker, 1957—, annual.

Paperbound books in print, New York, Bowker, 1955—, annual.

LC Catalogues (NUC) including, *National union catalog, per-19* ⸴ *imprints*

Monthly checklist of state publications

Monthly catalog of United States Government publications

Dissertation abstracts international
Verticle file index

Cumulative book index, New York, Wilson, 1898—, monthly.

In the USA, there is no single source containing all types of material. American publications are covered rather comprehensively in a series of bibliographies which almost cover the entire period since the beginning of early printing. Since 1898, *Cumulative book index* has been doing a good job. This is considered a complete record of American publications from 1898 onwards. In addition, the printed catalogue of the Library of Congress is a remarkable tool especially for publications which cannot be traced easily elsewhere. Publications by R.R. Bowker have contributed significantly towards a complete national bibliography. *Weekly record, American book publishing record* (a monthly cumulation from *Weekly record*), *Publishers' trade list annual, Books in print, Subject guide to books in print, Forthcoming books* are the leading bibliographies issued by Bowker. *Monthly checklist of state publications* and *Monthly catalog of United States Publications*, cover Federal and state government publications adequately.

A study of the above bibliographies shows a great deal of overlapping. These differ in accuracy, coverage and promptness in recording. However, coverage of American publications is highly satisfactory.

6 GREAT BRITAIN

The following is the existing pattern for national bibliography in Great Britain:

(1) Current bibliography:
  British national bibliography
  Bookseller
  Cumulative book index
  Monthly catalogue of government publications
(2) Retrospective bibliography:
  ASLIB index to theses accepted for higher degrees in the universities of Great Britain and Ireland.
  Catalogues of the British Museum
  British books in print
  Bibliotheca Britannica by Robert Watt
  Bibliographer's manual of English literature by W T Lowndes
  English catalogue of books . . .
  Short title catalogue of books printed in England, Scotland

and Ireland ... by A.W. Pollard and G.R. Redgrave
Short title catalogue of books printed in England, Scotland ...
by D.G. Wing

The above list includes the leading bibliographies which are adequate for most searches for current as well as retrospective documents. For retrospective material, catalogues of the British Museum are excellent. For current publications, *British national bibliography* is considered a very good source. In addition, one may also use *Bookseller, Cumulative book list* and *Cumulative book index.*

In the next few pages, *British national bibliography* has been described in detail. The description on trade bibliographies will be found in Chapter XIX.

British national bibliography, 1950-, London, British Library, Bibliographic Services Division, 1950-, weekly, publisher varies.

BNB is a list of new books published in Great Britain prepared by the Bibliographic Services Division of the British Library on the basis of books received by the Copyright Receipt Office of the British library.

It is a weekly listing of all books published in the British Isles excluding the following categories of publications:

(1) Periodicals (except those that are new or involve a change of title);

(2) Music (listed separately in *British catalogue of music*);

(3) Maps;

(4) Certain Government publications;

(5) Publications without a British imprint; and

(6) Cheap novelettes; etc.

Each weekly list contains classified and alphabetical parts. The alphabetical part consists of an index under authors, titles and series. Two separate indexes of authors and subjects, covering all items in the weekly lists for each month appear in the last weekly list of the month. The entries in the classified part are arranged according to the *Dewey decimal classification,* and are prepared according to the British text of the *Anglo-American cataloguing rules* (1967).

Each main entry given in the classified part contains the usual bibliographic details as per the rules of the *AACR* and in addition includes the ISBN number, price and *BNB* serial number. It also contains entries derived from advance information supplied by publishers, identified as CIP entry. Index entries contain complete bibliographic details except tracing. However, subject index entries contain the name of the subject and the class number as well. A

large number of feature headings in the classified part and detailed subject headings and cross references are also provided.

Cumulations of weekly lists are published for the periods January-April, May-August and January-December. Thus there are interim cumulations and annual cumulations. Besides, cumulated subject catalogues and cumulated indexes are available for long periods, generally five years. Cumulated subject catalogues and cumulated indexes provide subject, author and title approaches, whereby these are regarded as very handy tools for retrospective searches.

The *BNB* printed card service provides copies of each entry included in the weekly lists as unit author entries on standard-sized catalogue cards.

Considerably influenced by the ideas of S.R. Ranganathan, the editor conceived the weekly list of British books received in the Copyright Office as a subject list of books with author and title indexes plus subject index based on the principles of chain procedure. At present *BNB* uses PRECIS to derive subject headings. The processing of entries in *BNB* including their subject indexing is so thorough that it is recognized as a model to be emulated by librarians. The exhaustive index to the subject-matter of books treats them in depth, thus accurately highlighting the nuances of the subject. The parsimonious character of the classified arrangement is revealed when contrasted with the bulky size of the *Cumulative book index* with its dictionary arrangement.

BNB took another step in recent years with its involvement with the MARC project of the Library of Congress which has now become internationally accepted for purposes of producing machine readable data. The chain procedure which was used by it for many years for deriving subject headings from DC class numbers was found to be ineffective for purposes of the computer. *BNB* had perforce to replace the chain procedure by PRECIS, a technique for producing the subject index from machine readable data. Thus was born the basis of collaboration between the *British national bibliography* and the Library of Congress resulting in *Books in English* (1972-). It is a listing of about 100,000 works in the English language catalogued by the two collaborating agencies including CIP records. Since the British agency comprehends all current books published in the British Isles and its American counterpart receives English-language books published in the United States and other parts of the world, the joint enterprise is bound to result in the most comprehensive cumulation of current publications in the most important language of the world. Twelve self-cumulating issues,

each one superseding the other, are published on monthly basis followed by annual cumulation on high-reduction microfische. *Books in English* is thus a great advance on tools hitherto available. The value of *BNB* is greatly enhanced when combined with *Books in English* with its DC and LC class numbers, LC subject headings and LC card number. The publication can be used for purposes of book selection, bibliographic work and as a guide to cataloguing and classification by other libraries. The subscription rate may be the only inhibiting factor for many medium-sized libraries. Besides, the Retrospective UK MARC file, 1950-74 is available in magnetic file plus one microform listing or microform listing and quarterly file access.

Time lag in the printing of *BNB* has been reduced a great deal by printing it from computer-controlled phototype setting It has earned well-deserved praise from professional circles since it was launched twenty-five years ago, and ably headed by Mr A.J. Wells who has overseen the publication during the entire period of its existence. It is one of the few bibliographical publications commercially conceived, but planned and executed by professional librarians.

BNB is highly praised by librarians and scholars because it is excellently planned and executed, comes out promptly, provides authoritative catalogue entries and detailed indexing. However, there is some criticism of it also, due to the fact that there is a time lag between the appearance of a publication and its inclusion in *BNB*. This is due to the fact that some publishers deposit their publications late. All in all, *BNB* provides the best source of bibliographic references on publications brought out in the British Isles since 1950.

7 CONCLUSION

We may conclude that bibliographic control at the national level is of utmost importance for control at an international level. As a first step towards this objective we require a current, complete national bibliography for each nation.

The records of publications of various nations are incomplete. In the case of American, British and German works, existing bibliographics are somewhat comprehensive. The records of other nations especially developing ones, are rather unsatisfactory, and much remains to be done. However, the situation is beginning to improve though the task is becoming more difficult with the passage of time.

The availability of new methods of printing and especially the application of computers give us hope for the future.

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ROGER C. GREER, "National bibliography," in *Bibliography, current state and future trends*, Robert B. Downs a·d Frances B. Jenkins, ed., Urbana, University of Illinois Press, 1967, pp. 14-41.

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S.R. RANGANATHAN, *Classified catalogue code with additianal rules for dictionary catalogue code*, 5th ed., Asia Publishing House, 1964, part S.

A.J. WELLS, "B.N.B." *Annals of Library Science*, IV, 1956, pp. 73-89.

19 TRADE BIBLIOGRAPHIES

0 INTRODUCTION

A trade bibliography is one issued for, and usually by commercial organizations like booksellers, distributors, publishers and printers, etc., usually for a particular country. Their aim is to earn business. Trade people regard books as a physical commodity. They are not interested in bibliography for the sake of bibliography.

Trade bibliographies are national (sometimes international) in scope but usually record books and pamphlets only (dissertations, reports, house organs, society publications, etc., are excluded), that is, those publications which can be acquired through normal book trade channels. These serve the purpose of small libraries very well because they are usually not interested in non-trade items. On the other hand, special libraries or large libraries cannot afford to depend totally on trade bibliographies. The highly specialized libraries have to purchase mostly outside the book trade and, therefore, usual trade bibliographies are of little help to them. Trade bibliographies usually contain minimum bibliographic details and no annotations are provided, though sometimes, chapter headings may be listed. The element of selectivity is almost absent.

1 INDIA

11 Current Bibliographies

Some examples of current bibliographies are listed below:

BEPI; a bibliography of English publications in India, 1976-,
Delhi, D.K.F. Trust, 1977-, annual.

This is claimed to be a bibliography of significant and scholarly English publications originating from India, covering commercial, institutional and government publications. It covers atlases, books (or monographs), exceptional textbooks (which make some distinct contribution to the subject), extracted works, serials (very largely,

advances, annual reports, proceedings and transactions of societies, conferences, congresses and legislative bodies, seminars and symposia volumes and yearbooks), and series publications. The examination of the publication shows that the claim made by the publisher about inclusion of only 'significant and scholarly English publications' is not fully correct. It includes publications appearing in the form of original editions, Indian reprints, Indian editions, revised and new editions, and new imprints. "Furthermore, apart from including publications bearing the current imprint date (that is 1976), those bearing imprint dates of earlier years—mainly originating from lesser known commercial or individual publishers, private or public bodies, autonomous/semi-autonomous research institutes, societies and even less-organised government agencies,—which did not become easily available or available at all prior to 1976, have also been included in this issue." As a result, books published in 1974, 1975 and even in 1973 find a place.

The bibliography contains about 16000 entries in three parts consisting of author part, title part and subject part. The author part is the main part and provides author entries giving maximum information including appropriate notes when considered desirable. This part also includes entries for joint authors, compilers, commentators, editors, translators, etc. Title part includes brief information sufficient for identification of the publication. Subject part covers about 500 subjects and subject references. In case a book requires two or three subjects, then as many subject entries as required have been given. Author part, title part and subject part contain 5267, 4152 and 6569 entries respectively.

This seems to be a good attempt. At present, a number of bibliographical tools are available for bibliographical control of Indian publications. There is much duplication between these efforts. It is hoped that a spirit of competition will help in bringing improvement in these tools. There is a great time-lag in the issue of Annual volumes of *Indian national bibliography*, the last one being for 1973. Therefore, *BEPI* fills up a gap.

Books on India: Supplement to *Index India*, 1967-, annual.

This is a useful list of books on India. The special feature of this work is that analytical entries for composite works have been provided.

D. K. Newsletter, Delhi, D. K. Publishers' Distributors, 1974-, v. 1-, fortnightly.

A useful source for recent Indian books in English. Each issue has also focus of coverage on a particular subject, giving a biblio-

graphy.

Indian book industry, Delhi, Sterling, 1969-, monthly.

It is a journal of the book industry. Amongst many current trade bibliographies issued from India, this is considered a better one. It lists books published as well as forthcoming publications. It also includes book reviews. It brings out subject bibliographies and special issues, and is a useful current source for Indian trade publications.

Indian book reporter, Gurgaon (Haryana, India), Prabhu Book Service, 1965-, monthly.

This is a useful publication.

Indian books, 1969-, Varanasi, Indian Bibliographic Centre, 1970-, annual.

It is a serial bibliography of Indian books published or reprinted in the English language. The volume for 1974 includes books published or reprinted in 1974 and was published in 1975. Children's books, school textbooks and government publications (except those by the Publications Division, Ministry of Information and Broadcasting, and district gazetteers) are excluded.

It consists of an author, subject and title part, each containing complete entries and is a reliable publication.

Indian books, 1974-75: an annual bibliography, New Delhi, Today and Tomorrow, 1975.

This is a fourth annual issue which includes about 5,000 entries and references. It attempts to record Indian books in English published or reprinted in India during 1974. It covers books and monographs published by the book trade, publications of the state and central governments, and those issued by learned societies and institutions. The entries are arranged in three separate sequences, author, title and subject. It serves as a supplement to *Reference catalogue of the Indian books*.

Indian publisher and bookseller, Bombay, Popular Book Depot, vol. 1-, 1951-, monthly.

This provides a list of the publications of the month. It brings out special numbers from time to time.

New arrivals, New Delhi, Jain Book Agency, monthly.

It is an excellent selective source for Indian Government publications. In fact, it is the one source which provides information at the earliest.

Recent Indian books: a quarterly catalogue of Indian publications, New Delhi, Federation of publishers and Booksellers Associations in India, vol. 1-, June 1975-, quarterly.

It is an annotated list of Indian books, published recently and arranged according to broad subject headings. It also includes forthcoming publications. It is a selected list aimed at promotion of export of Indian publications.

There are quite a large number of current bibliographies issued from India covering Hindi and other Indian languages. The one given below represents one such example:

Prakashan Samachar, Delhi, Rajkamal Prakashan, 1953-, monthly. It covers Hindi books.

12 Retrospective Bibliographies

Impex reference catalogue of Indian books, New Delhi, Indian Book Export and Import, 1960.

Impex supplement, 1960-62: Reference catalogue of Indian books, New Delhi, Indian Book Export and Import, 1962.

At one time, when retrospective bibliographies relating to Indian publications hardly existed, *Impex* served a very useful purpose.

Indian books in print, 1955-67, a select bibliography of English books published in India, compiled by Sher Singh and S.N. Sadhu, Delhi, Indian Bureau of Bibliographies, 1969.

It is a select bibliography of English books published in India from 1955 to 1967, and was released towards the end of 1969. It includes over 40,000 books and pamphlets by about 1500 publishers. It also covers a large number of publications brought out by various societies and institutions. Government publications including pamphlets have been included. However, non-government publications appearing as pamphlets have been included only when thought to be of some significance. A random check shows that many little-known publications and publications by small publishers have not been included, which could perhaps be due to difficulty in getting information.

The work is divided into five parts: (*i*) Classified part, (*ii*) Author index, (*iii*) Title index, (*iv*) Subject index, and (*v*) List of Indian publishers. In the classified part, entries have been arranged by subject according to *Dewey decimal classification* (16th edn.), and suitable feature headings have also been provided. The entries included in this part give the usual bibliographic information, and class numbers according to *Dewey decimal classification* have been assigned to these. The author and title index entries contain complete bibliographic information and satisfy the approaches through author and title. This repetition of details could have been avoided. The subject index provides subject approach and refers the user to the

classified part, where entries for the same specific subject are to be found at one place. It is suggested that the entries in the classified part should have been numbered serially so that indexes could have referred to the classified part through these numbers. This would have been more convenient to users. The entries in general have been prepared according to the rules given in *Classified catalogue code with additional rules for dictionary catalogue code* (1964) by S.R. Ranganathan. Since the work has been compiled by librarians, it can serve as a useful aid in cataloguing and classification of publications included here.

The book is a major contribution to the bibliographic organization of Indian materials. It is of immense value to librarians, booksellers, publishers and also to those interested in buying books.

Indian books in print, 1972: A bibliography of Indian books published up to December 1971, in the English language, Delhi, Indian Bureau of Bibliographies, 1972, 3 volumes.

It covers about 60,000 publications in English published from 1901 to 1971. It follows the same pattern as that of *Indian books in print, 1955-67.* The first volume covers author entries, and the second and third volumes contain title and subject entries respectively. It covers a period neglected by Indian bibliographies. It fills an important gap in the bibliographic control of Indian publications. However, it may be pointed out that in some cases, bibliographic details have been taken from secondary sources of information, in which case, the information may be less dependable. The same may be said of most bibliographies of Indian origin. *Indian books in print, 1973,* was published in 3 volumes in 1973. It includes books published up to December 1972.

Indian books in print, 1979: A bibliography of Indian books published up to December 1977 in English language, Delhi, Indian Bibliographies Bureau, 1979, 3 volumes.

It lists nearly 75,000 Indian books printed in English language published up to December 1977.

Reference catalogue of Indian books in print 1973, Delhi, Today and Tomorrow, 1973-77, 3 volumes.

———, supplement, 1973-75, Delhi, Today and Tomorrow, 1976.

Volume 1 is the title index covering 70,000 titles published in India till 1972 by about 3,400 publishers. Volume 2 is the author index and also contains a list of publishers. Volume 3 is a subject guide and lists all books in print published in English in India, arranged alphabetically by subject. Volumes 1 and 2 have been kept up-to-date by issuing a *supplement,* in 1976, which contains 15,000

references published during 1973 to 1975, provides author and title entries. There is much duplication between this work and *Indian books in print*. This catalogue needs to be made more dependable because, very often, the information has been collected from secondary sources. The claim is made by the compilers, that this work, includes "books in English in print and on sale in India." In a country like India, where the books trade is not well organized, it would be difficult to justify such a claim.

Brihad Hindi granth suchi, compiled by Y. Mahajan and K. Mahajan, Delhi, Bhartiya Granth Niketan, 1965.

It is a bibliography of books in Hindi published in India, covering about 24,000 books by 530 publishers. It does not provide sufficient bibliographic details. By no means can it be considered an authoritative bibliography.

Hindi-sahitya sarini or Hindi bibliography: being a universal, classified and scientifically arranged record of Hindi books published up to the end of 1964, compiled and edited by Pitamber Narain Sharma and others, Hoshiarpur, Vishveshvaranand Institute, 1971-1974, 2 parts.

There are few retrospective bibliographies for publications in Indian languages. The above ones represent one such attempt.

2 UNITED STATES OF AMERICA

American reference books annual, 1978, 9th ed., Littleton Colorado, Libraries Unlimited, 1978, annual.

An important feature is the citation of reviews in other journals and the reviews themselves. It is an excellent source of reviews, though some reviews are long, others short.

Cumulative book index; a world list of books in the English language, New York, H.W. Wilson, 1898 to date, monthly (published monthly except August with quarterly cumulations, permanent bound annual cumulations. Sold on service basis).

It is a world list of books published in the English language. It also includes non-English language books published in USA. 50,000 to 60,000 books are indexed each year. Foreign language dictionaries, grammars, phrase-books, readers, editions of foreign classics and other aids to language learning are included if they contain some English. Government documents, most pamphlets, inexpensive paper-bound books, maps, music scores, editions limited to five hundred (or less) copies, privately published genealogies, local directories, prospectuses, tracts, tests, propaganda, and in

general, all material of a local, fugitive and ephemeral nature are excluded.

Author (entries are also provided under editor, translator and joint author), subject and title entries are also arranged in one alphabet. Names of persons precede names of things, and the title appears last. Under the names of persons, works of which the person is the author are listed first followed by references to works of which he is a joint author, editor or translator. Works about the author appear last.

Author entries contain the complete citation including full name form (including pseudonyms), complete title, series, edition, pages, price, date of publication and publisher, ISBN and Library of Congress card numbers are given when available. When a book is published in more than one country, the publisher of each country of issue is given, with the price listed in the currency of that country, except in the case of a few publishers who habitually quote otherwise.

CBI gives a checklist of recent English language publications issued in countries other than Great Britain, Canada and the United States. It provides a directory of publishers and distributors in each issue, and a complete list is given in the March issue and previous bound volume. *CBI* is highly useful for book selectors, who want to select on a subject basis.

Sometimes, an entry may be included late. As many publishers do not care to send lists of their titles, and as books sent by publishers are ignored by *CBI* in some cases, the list of books in English as given in it is not always complete.

It is an indispensable tool for selecting books published in English. The remarkable thing about this tool is that it goes back to 1898. Thus, it should be considered a basic retrospective bibliography.

Publishers' weekly, New York, R.R. Bowker, 1872 to date, weekly.

Each weekly issue provides information about current trends, leading events, and prevailing conditions about the world of books. It performs an important service by informing regarding new, popular and forthcoming titles, which are expected to be in demand. Gives lists of paperback and hardcover best sellers.

Weekly record, New York, Bowker, 1974-; weekly.

It records on weekly basis books published in the United States.

American book publishing record, New York, R.R. Bowker, 1961-, (published monthly with annual and five-year cumulations).

ABPR cumulates entries from *Weekly record* on a monthly basis.

Thus, it is a list of current American books.

It has a classified part arranged according to *Dewey decimal classification*, along with author and title indexes. Following the classified part, there are three lists, fiction, juvenile and paperback. The items of information are the same as those given in *Weekly record.*

There is an *American book publishing record* annual which gives author, subject and title indexes to all entries in the monthly mentioned above, for the past period.

ABPR is extremely useful, especially for small libraries.

Weekly record, ABPR (monthly) and *ABPR (annual).*

Weekly record is a weekly; cumulated monthly, it becomes *the ABPR.* The monthly *ABPR* is again cumulated into an annual. Thus we get current as well as permanent (annual) record of a majority of publications issued by American publishers for a given week, month and year.

Weekly record covers recent publications. *ABPR* (monthly) provides author, title and subject approaches to current publications. Thus it is very helpful if the user approaches with incomplete information. *ABPR* (annual) is also very helpful in the sense that a reference librarian instead of searching 52 issues of *Weekly record* would have to search just one annual issue of *ABPR.*

CBI versus *ABPR*

CBI goes back to 1898 whereas *ABPR* started in 1961. Thus, for publications earlier than 1961, *ABPR* is not helpful. *ABPR* includes only American publications and foreign titles released by American publishers, whereas *CBI* covers American titles (in English as well as other languages) and foreign titles in English. One advantage of *ABPR* is that its entries include more cataloguing detail than *CBI.* For instance, *ABPR* contains additional information like Dewey decimal classification numbers, Library of Congress classification numbers, subject headings and added entry tracings. However, the dictionary arrangement of *CBI* which includes author, subject and title entries in one sequence is preferred by some over provision of various indexes by *ABPR.*

A non-American library would prefer to acquire *CBI.* On the other hand American libraries other than the large one prefer *ABPR* because it is of greater help to cataloguers and acquisition librarians for verification of bibliographic details regarding author or title. Besides, such libraries being interested mainly in American publications, would find *ABPR* more satisfactory.

Publishers' trade list annual, R.R. Bowker, 1873-.

PTLA is a collection of catalogues of American publishers in book form. These catalogues are cut to a certain physical size but contain various typefaces and follow different arrangements. However, they are bound in alphabetical order by the name of the publisher.

Books published outside the trade, periodicals, government documents, and non-book forms are largely excluded unless the publisher includes them in his catalogue.

The reliability of information depends on the accuracy of the information supplied by individual publishers. It is helpful only when the publisher is known. Major publishers of the United States have been included.

Books in print, New York, R.R. Bowker, 1948-, annual.

BIP is an annual publication listing all in-print and forthcoming titles from more than 5500 publishers. It is produced from the Bibliographic Information Publication System (BIPS) data base of R.R. Bowker. It is produced from records stored on magnetic tape, edited by computer programmes, and set in type by computer-controlled photo-composition.

It provides author and title approaches. It covers 4,50,000 titles from children's books to paperbacks and textbooks. However, government publications, most professional law book publications, subscription reference sets and book club editions are excluded. Information includes author, title, price, edition, binding, publisher, year of publication, illustrations, series and the ISBN.

It tells whether a book is available for purchase, from whom and at what price. Again, reliability depends on the accuracy of the information supplied by individual publishers.

Subject guide to books in print, New York, R.R. Bowker, 1957-, annual.

This work was produced from the Bibliographic Information Publication System (BIPS) data base of R.R. Bowker. It is a companion volume to BIP. The 21st edition appeared in two volumes in 1977, produced from records on magnetic tape, edited by computer programmes, and set in type by computer-controlled photo composition and arranged alphabetically by subject using 8th edition of *Library of Congress subject headings*, thus obtaining a subject guide to *BIP*. It is a subject index to those books which were listed by author and title in *BIP*. 409,000 books appear about 533,000 times under about 62,000 headings with over 52,500 cross references.

There are no entries for fiction, poetry, drama or the Bible. Of

course, fiction will be found listed under the author's name, under which will also be found any critical work on him.

The *Subject guide* helps to locate a book on a given subject and is also of great help in building collections in a given subject area.

It should be kept in mind that this list is not selective but inclusive. However, government publications, most professional law publications, subscription reference sets and book club editions are excluded.

The *Subject guide* uses over 62,000 Library of Congress subject headings and almost as many cross references. In the case of highly complicated subdivisions, some compression from Library Congress headings is made.

It covers children books, too, indicating that they are for juveniles, and appropriate grade levels are assigned. Paper-bound books are also included. It contains a directory of publishers, and is a collection of bibliographies on various subjects. It is an indispensable tool, listing almost all trade books in print in the US, and many forthcoming books.

Books in print supplement, New York, R. R. Bowker, 1973-, annual.

This is issued in April. It lists new and forthcoming books, changes in price and out of print titles since the last issue of *Books in print*. The list provides author, title and subject approaches for books in print, being the books which are available for purchase. It thus supplements *Books in print* and *Subject guide to books in print*.

The other companion tools are *Forthcoming books*, *Subject guide to forthcoming books*, *Paper-bound books in print*, *El-Hi textbooks in print*, *Law books in print*, *AB bookman's weekly*, *Scientific and technical books and serials in print*, *Medical books and serials in print* etc. These are all produced from data bases of the Data Services Division of Bowker.

Reference services review, Ann Arbor, Michigan Press, 1972-, quarterly.

This useful work contains reviews of reference books published in different countries.

3 UNITED KINGDOM

Bookseller, the organ of the book trade, 1858-, London, Whitaker, 1858-, weekly.

A weekly trade magazine containing articles on book trade, news,

etc., and lists of new British publications for the week. The listing is given under author and title and sometimes under subject, where this forms part of the title. In spring and autumn, special numbers are issued, which contain an index to books announced. This index provides a list of books likely to be published during the following months.

Whitaker's books of the month and books to come, London, whitaker, 1970-, monthly.

This includes a list of books published during the past month, together with those due to be published during the next two months.

The "publications of the week" listed in *Bookseller* are cumulated to form a list of the month's publications in one sequence, and includes books announced for publication in the following two months listed separately. It also includes preview of books to come.

Whitaker's cumulative book list, 1924-, London, Whitaker, 1924-, quarterly.

It is based on lists of new books in the weekly *Bookseller*, which themselves cumulate on a monthly basis. The list is issued quarterly, covering all the books published during the period January-March (three months' books), January-June (six months' books) and January-September (nine months' books). These three issues are followed by *Whitaker's cumulative book list*, an annual volume, and are later cumulated into three-yearly volumes (previously, it was five-yearly cumulation).

The arrangement is classified under subject with an index of authors, titles and subjects.

The list is not completely comprehensive. Therefore, it has to be supplemented by the *British national bibliography*, since its coverage of non-trade publications is less comprehensive.

Paperbacks in print, London, Whitaker, 1961-, semi-annual.

British books in print, London, Whitaker, 1967-, annual.

This is a continuation of *Reference catalogue of current literature* published since 1967. It is a national inclusive reference index of books in print and on sale in the United Kingdom. Books under the price of £0.12½ are not included. The author, title and subject entries along with references are given in a single sequence. Entries are given under the subject of the book where this forms part of the title or sub-title.

It is certainly a useful work, but we find that very often a publication listed in it may be out of print due to the time-lag between receipt of information and the issuing of the above bibliography.

English catalogue of books. . . 1801-, London, S. Low, 1864-1901; Publisher circular, 1906-, annual (six volumes cover the whole of the nineteenth century. For the twentieth century, five-yearly cumulative volumes are available.)

It is an annual based on the weekly lists of publications included in the *Publisher's circular*, which itself cumulates into monthly lists. It includes books and pamphlets issued in Great Britain and Ireland. It covers selected American and continental books for some years in the late nineteenth century. It is less satisfactory for current and recent books, and is also not as comprehensive as *Whitaker's cumulative book list*. However, it serves as an excellent retrospective bibliography of British books for the nineteenth and twentieth centuries.

It contains a useful supplement of the publications of learned societies, associations, clubs, etc., and appendix lists, maps and atlases. There is a section for paperbacks, as well as a directory of publishers.

Of course, *Cumulative book index* is another useful source. However, it does not cover British publications comprehensively.

British national bibliography is more reliable than *Whitaker's cumulative book list* and *English catalogue of books* because in *BNB*, the entries are prepared from the books themselves. *BNB* provides more bibliographic details and its arrangement is highly systematic, providing for multiple approaches through its indexes. *BNB* also covers non-trade publications more extensively than trade bibliographies. However, trade bibliographies are more up-to-date and include reprints and forthcoming publications as well.

4 CONCLUSION

The trade regards a book as a mere physical entity, thereby neglecting display of intellectual content of the book. Recently, they have begun evolving a pattern to display the latter. Very often, trade bibliographies do not conform to practices set by standard catalogue codes.

In India the book trade is not well organized. Therefore, trade bibliographies produced here leave much to be desired. There is a lack of suitable trade bibliographies in Indian languages, more than made up by the multiplicity of trade bibliographies covering English language publications, that overlap and are compiled from secondary sources, with the result that information provided may not be completely dependable. There is need for great improvement in terms of

coverage, time-lag and accuracy of details. Overlap also needs to be avoided.

Trade bibliographies are precursors of national bibliographies. These have existed for a long time, whereas national bibliographies came into their own only after the Second World War. Even today, national bibliographies are not available in many countries. Thus trade bibliographies have an important role to play. These either serve as national bibliographies or supplement them. Commercial organizations are mostly interested in covering current publications but are also beginning to take an interest in books in print as well as retrospective bibliographies. This is a healthy sign. National bibliographies and trade bibliographies need to exist side by side to supplement each other.

FURTHER READING

NORMAN E. BINNS, *Introduction to historical bibliography*, 2nd ed., London, Association of Assistant Librarians, 1962, pp. 363-372.

ROBERT L. COLLISON, *Bibliographies, subject and national*, 3rd ed., London, Lockwood, 1968, Ch. 12.

WILLIAM A. KATZ, *Introduction to reference work*, 3rd ed., New York, McGraw-Hill, 1978, Vol. I, Ch. 3.

S. R. RANGANATHAN, *Reference service and bibliography*, Madras, Madras Library Association, 1940, Vol. 1, pp. 432-56.

20 NATIONAL LIBRARY CATALOGUES

0 INTRODUCTION

PRINTED library catalogues serve as general bibliographies because they are not limited by subject, period of time, form of material, country or language. The printed library catalogues of great libraries are excellent tools for identifying a work which is either little known or for which bibliographic details are incomplete or suspect. Besides, these are excellent sources of information, indicating what books have been written by a given author or been published on a certain subject.

The printed library catalogues of major national libraries list enormous collections. Therefore, one can usually search these with great probability of locating an item irrespective of its subject, place of publication, period, language or kind of material. The printed catalogues of great national libraries are prepared with great care, and are therefore highly reliable. Taken collectively, they represent a somewhat comprehensive record of international publishing. In order to get the best from them, one must have a good knowledge about them.

1 LIBRARY OF CONGRESS CATALOGUES

The Library of Congress, Washington has considerable reputation in professional circles for the highest standards maintained in its cataloguing techniques, and a catalogue card service that enjoys an international reputation. Unlike the catalogues of the British Museum, the Library of Congress catalogues are used extensively for verification of titles and obtaining bibliographic information. The subscription to its card service ensures that many libraries in the world keep abreast of its holdings. This arrangement was however not found adequate because of the growing bulk of the catalogue. Printed catalogues were the answer. The first major attempt in this direction was the publication of *A catalog of books represented by Library of Congress printed cards, issued up to 31 July 1942* (1942-46, 167 volumes) and its supplement for 1942-47 (1948, 42

script and are not romanized except for headings and subject headings, to assure continuity in a unified catalogue organized by principles of alphabetization peculiar to the Roman script. The *National union catalog* is produced by the Library of Congress in conjunction with the Committee on Resources of American Libraries of the American Library Association. The quinquennial volumes are supplemented by nine monthly issues, and three quarterly and one annual cumulation to keep it up-to-date.

The entries are primarily for books, maps, pamphlets, atlases, periodical publications including periodicals, music, filmstrips and films. It contains main entries listed under author or title (if there is no author) but never under both author and title. Thus, it provides approach through the author only. There is no subject approach and the number of cross references provided are very few. The bibliographic details include author's full name, birth and death dates, full title, place of publication, publisher's name, date of publication, collation, series, edition, notes on contents, history, tracing section, the Library of Congress number, usually Dewey decimal class number and Standard Book Number.

Library of Congress, *Books: subjects*, contains *National union catalog* entries rearranged by subject. Thus it satisfies the subject approach. It covers material published since 1945. Although this catalogue was started in 1950, the entries in it go back to books published since 1945. This subject catalogue covers all publications catalogued by the Library of Congress not necessarily possessed by other member libraries contributing entries to the *National union catalog*.

Beginning from July 1956, library catalogues issued by Library of Congress took up the the new name of *National union catalog*. It may be added that prior to 1956, the printed catalogues of Library of Congress represented books catalogued by Library of Congress only. Then it was not a *National union catalog*. However, from 1968, *National union catalog: pre-1956 imprints* began to be published. "It is a repertory of the cataloged holdings of selected portions of the cataloged collections of the major research libraries of the United States and Canada, plus the more rarely held items in the collections of selected smaller and specialized libraries." As and when completed, it is likely to include 10 million titles available in the Library of Congress and about 800 North American libraries in about 610 volumes, a monumental work indeed. So far 589 volumes have been published. Once this work becomes available, then a user would be required to consult this set and cumulations of *National union catalog* since 1956. This will be found very convenient.

The following is the list of catalogues emanating from the Library of Congress:

US Library of Congress, *A catalog of books represented by Library of Congress printed cards* (cards issued from August 1898 through July 1942), 167 volumes, Ann Arbor, 1942-46.

—, Supplement (cards issued from August 1942 to December 1947), 42 volumes, Ann Arbor, 1948.

Library of Congress author catalog, 1948-1952, 24 volumes, Ann Arbor, 1953 (vol. 1-23, authors, vol. 24, films).

US Library of Congress, *the National union catalog: a cumulative author list representing Library of Congress printed cards and titles reported by other American libraries, 1953-1957*. Published in 1958, 28 volumes (vol. 1-26, authors, vol. 27, music and phonorecords, vol. 28, motion pictures and filmstrips).

—, 1952-55 (imprints), published in 1961, 30 volumes.

—, 1958-1962, published in 1963, 54 volumes.

—, 1963-67, published in 1969, 72 volumes.

—, 1956-67, published in 1970-72 (a cumulation).

National union catalog, pre-1956 imprints (to be completed in about 610 volumes), London, Mansell, 1968—.

Note: There are nine monthly issues and three quarterly cumulations of *National Union catalog*. Annual cumulations usually form 12 to 14 volumes and these come out after a timelag of about one year after the monthly issues.

. US Library of Congress, *Books: subjects, a cumulated list of works represented by Library of Congress printed cards*, Washington, D.C., Library of Congress, Card Division, 1950-, three quarterly issues with annual cumulations.

2 BRITISH MUSEUM CATALOGUES

The British Museum, or rather its Department of Printed Books (The British Museum is now a part of the British Library and has become its reference division) to be more accurate, may not be the largest collection in the world but it is certainly one of the most precious records of human endeavour in terms of the printed word. Its catalogues are eagerly sought by bibliographers, bibliophiles and research scholars. One of the earliest catalogues of books in the Museum was the *Catalogue of books . . . printed in England, Scotland and Ireland, and of books in English printed abroad to the year 1640* (London, 1884, 3 volumes). The total collection of books up to the year 1640 could be contained in the first three volumes. The

major attempt however was the *Catalogue of printed books* (1881-1900, 95 volumes). It is a long jump from 3 volumes to 95 volumes in a span of two and a half centuries. The proliferation in the printed word is so obvious. This was followed by a supplement of 13 volumes (1900-1905). The catalogue began to burst at the seams and the next edition in 51 volumes reached the letter D without yet being half-way through the letter! This process took twenty-four years, between 1931 to 1954, and the scheme had to be abandoned due to mounting costs. The title by this time had been changed to *General catalogue of printed books* by the addition of one suffix.

The Trustees of the British Museum decided to refurbish the whole scheme starting afresh with a new edition produced by photo-offset lithography. The present strategy has yielded results because books catalogued through 1955 have been reproduced in 263 volumes. The *General catalogue* reproduces the catalogue from manuscript form without much editing. Since the original catalogue, several centuries old, has considerable variations, uniformity is not its special feature. This lacuna is compensated for by the richness of the contents. The British Museum was a depository of British publications as well as publications of its colonial territories. Content-wise, it is perhaps the richest collection for pre-First World War publications in the whole world. The British Museum's catalogue includes the holdings of the Museum only. It is an author catalogue and unlike its predecessor series, there are no title entries in it. Subject entries are included to a limited extent due to an accident of peculiar cataloguing rules of the British Museum. For instance, under personal names, bibliographical works are included and under religious classics, all writings are placed under the classic, thus creating a pocket for the Bible and the Quran.

The *General catalogue* covers a large amount of analytical material and cross-references are given liberally. Catchword title entries are given, which to some extent overcome the lack of subject catalogues.

For those interested in a subject approach, *Subject index of the modern works added to the Library . . . 1881-1900* (London, 1902-03, 3 volumes) is available. It has been continued by five-year supplements, with the latest one being for 1946-50 in 4 volumes. Those interested in holdings of the British Museum prior to 1880 can depend upon the commercially published *Subject index of books published before 1880* (1933-48, 4 volumes), compiled by Robert Alexander Peddie. The arrangement of entries in subject indexes is alphabetical, with subject headings specific rather than

general. Subject headings are thus heavily loaded in several instances.

Due to an infrequent programme of publication, the *General catalogue* should be regarded as more or less a retrospective bibliography. The subject index, too, comes out many years after the entries have appeared in the *General catalogue*.

Besides the *General catalogue* and subject indexes, the British Museum has brought out a large number of catalogues of its holdings of books in Indian languages. Until 1947, it was a depository of all publications of British India. The collections of the India Office Library and the British Museum are the most comprehensive collections of Indian publications inside and outside the country. The British Museum used to publish its holdings on Indian languages from time to time. Those are considered priceless because they are the only bibliographical raw material available to us on Indian publications. It is a pity indeed that the British Museum has not been able to keep up the tradition by continuing a programme of publication of its catalogues of Indian material.

The catalogues of the British Museum represent the splendid collection of a great library. It is a major retrospective tool for searching for publications on any subject, published in any language, anywhere, at any time, especially for publications of British origin. Thus, it is an indispensable tool for any large research library.

The following is a list of the major catalogues emanating from the British Museum:

British Museum, Department of Printed Books, *General catalogue of printed books*, London, Trustees of the British Museum, 1965-66, 263 volumes.

—, —, *General catalogue of printed books, ten-year supplement, 1956-65*, London, Trustees of the British Museum, 1968, 50 volumes.

—, —, *Subject index of the works added to the Library of the British Museum in the years 1881-1900*, London, Trustees of the British Museum, 1881-, (five-year supplements have been published since the initial three-volume work published in 1903).

3 PRINTED CATALOGUES OF THE BRITISH MUSEUM *VERSUS* LIBRARY OF CONGRESS

It may be interesting to compare the printed catalogues of two great libraries. The British Museum catalogue is much older than the Library of Congress catalogue. While there can be no two opinions

about the superiority of the British catalogue with regard to its past holdings, especially titles from the fifteenth century, its American counterpart scores over the other in contemporary holdings. For recent material the Library of Congress catalogue is certainly stronger in terms of quantity and international coverage and its subject catalogue is superior and covers a larger amount of material as well.

Due to its late publication programme, the British Museum catalogue serves more or less as a retrospective bibliography. The Library of Congress catalogue is highly useful as a current as well as retrospective bibliography. It has the advantage of being kept up-to-date through monthly and annual supplements.

Both provide careful bibliographic description done from actual publications, making them highly reliable.

The Library of Congress catalogue has maintained the highest cataloguing standards and is the best product of inter-library cooperation. It is based on cataloguing rules used by libraries all over the Anglo-American world, which are almost universally accepted. Therefore, most persons find it easy to use. The British Museum catalogue is based on British Museum rules which follow out of date practices, making this catalogue more difficult to use for those who are not familiar with British Museum rules.

In the final analysis, it is invidious to compare and contrast the two national printed catalogues because in the proper sense of the term they supplement rather than compete with each other.

4 NATIONAL LIBRARY (CALCUTTA) CATALOGUES

The National Library, Calcutta has been a pioneer in bibliographic work. The tradition goes back to the year 1855, when the catalogue of the Calcutta Public Library, the predecessor to the National Library, was published, listing titles in vernacular. This tradition was continued by the Imperial Library, the name by which the National Library was known up to 1947.

Output in the post-Independence period includes several volumes of author catalogues of books in European languages, catalogues of books in Sanskrit and Bengali, catalogues of periodicals, newspapers and gazettes and the list of documents contained in Sir Tej Bahadur Sapru's private papers. The total output is topped by a three-volume bibliography of Indology.

5 OTHERS

The other two great national catalogues especially for non-English

materials are given below:

Catalogue general des livres imprimes de la Bibliotheque Nationale: *Auteurs*, Paris, Imprimerie Nationale, 1900-, vol. 1-.

This catalogue represents the holdings of the National Library of France, which is considered a primary source of information on French books. However, entries are not provided for anonymous works, government and corporate authors, or periodicals. Bibliographic details provided include author's full name, title, imprint, collation and sometimes, notes of contents, original publication in case of reprints from periodicals, etc. Each volume of the catalogue gives stock as on the date of publication. The production of this catalogue is slow but maintains a high standard of editing. It is a highly dependable work.

Berliner Titeldrucke: Verzeichnis der von der Staatsbibliothek, den . . . Berlin, 1892-.

This is another great national catalogue especially for German material.

6 CONCLUSION

From the above description, it becomes obvious that the catalogues of great national libraries like the Library of Congress, the British Museum and the Bibliotheque Nationale are invaluable. They are entitled by law to receive copies of all books published in their respective countries, which make them the most comprehensive single records of publication in the country concerned. They are extremely rich sources of bibliographic information and for location of documents.

FURTHER READING

FRANK FRANCIS, "The American record," *Times Literary Supplement*, Feb. 6, 1976, p. 141.

WILLIAM A. KATZ, *Introduction to reference work*, 3rd ed., Vol. 1, New York, McGraw-Hill, 1978, Ch. 3.

MARGARET PORTER SMITH, "The National union catalog pre-1956 imprints: A progress report," *Library Resources and Technical Services*, 20 (1), 1976, pp. 48-52.

C.M. WINCHELL, *Guide to reference books*, 8th ed., Chicago, American Librar Association, 1967, pp. 7-9.

21 SUBJECT BIBLIOGRAPHIES

0 DEFINITION

ACCORDING to Ranganathan, "A subject bibliography is a document bibliography confined to a specified subject-field only, instead of covering the entire universe of subjects."[1] The subject may be a person, geographical entity (such as a study of a locality or an area study), form of material, form of literature, etc.

1 EXAMPLES

11 Person

Dudley David Griffith, *Bibliography of Chaucer, 1908-53*, Seattle, University of Washington Press, 1955.

William Jaggard, *Shakespeare bibliography . . .* , Stratford-on-Avon, Shakespeare Press, 1911.

Richard Little Purdy, *Thomas Hardy, a bibliographical study*, Oxford University Press, 1954.

12 Geographical Entity

Documentation on Asia, 1960-, Delhi, Vikas Publishing House, vol. 1-, 1962—(vol. 4 was published in 1974, publisher varies). This is a subject bibliography of articles and documents on Asia.

13 Form of Material

New geographical literature and maps, London Royal Geographical Society, vol. 1-, 1951-, semi-annual.

14 Form of Literature

Fiction catalog, 8th ed., 1970, New York, Wilson, 1971, with four annual supplements, 1971-1974.

Essay and general literature index, New York, Wilson, 1934-.

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[1]S.R. Ranganathan, *Physical bibliography for librarians*, 2nd ed., Bombay, Asia Publishing House, 1974, p. 21.

15 Others

American scientific books, 1960-61—1964-65, New York, Bowker, 1962-66, annual.

Library literature, 1921-32-, New York, Wilson, 1934-, quarterly.

Cambridge bibliography of English literature, F.W. Bateson, (ed.) Cambridge University Press, 1940-57, 5 volumes.

New Cambridge bibliography of English literature, George Watson (ed.) (volume 4 edited by I.R. Willison), Cambridge University Press, 1971-72, 4 volumes.

2 USEFULNESS

It has been found that generally users of bibliographies approach them through subject rather than author. Most frequently they wish to find out what books have been published on a given subject. Less often do they want to know what books have been written by a certain author.

As research scholars and most other users of bibliographies approach the latter through subject, the role of subject bibliography becomes very important. A subject bibliography attempts to bring together all material on a given subject. In the absence of such a bibliography, one would take too much time to get the desired documents on a subject together and one would not be too sure whether the list was complete.

Of the various types of bibliographies, a subject bibliography is of greatest direct as well as exact service to a reference librarian.

The above goes to show the usefulness of subject bibliographies. They play an important role in the advancement of scholarship and human society.

3 SCOPE

Subject bibliographies can occur as part of books or as independent books, in periodicals or as independent periodicals.

A subject bibliography has to be prepared, keeping in view the class of users to be served. It can be intended for specialists or non-specialists.

A subject bibliography usually has certain limitations with regard to form of materials, time, sources of origin, language, etc. However, sometimes in a narrow area of specialisation, a subject bibliography may have no such restrictions.

Comprehensive or selective subject bibliographies can be either

current or retrospective. The term current means most recent. A bibliography having a time-lag of four years may still be current, if there is nothing more recent available. Retrospective bibliographies are those which list documents issued during a definite period in the past. The terms current and retrospective are used in a comparative sense.

A bibliography may become selective if it includes only significant material.

Although a bibliography on a specific subject is supposed to cover material on that subject, it may also include material from allied areas. For example, *Library literature* contains documents from allied areas like publishing, printing, reprography, etc. This is how a bibliography becomes more useful and comprehensive.

The early subject bibliographies were mostly of books, the inclusion of articles from periodicals being a later development. There are subject bibliographies which include not only books but even parts of books. The same is the case with *Essay and general literature index* (New York, Wilson, 1934-).

The indexing and abstracting periodicals in specific subject fields are also subject bibliographies. To a research scholar, these are usually of greater importance than bibliographies containing only books. This is more true in the sciences.

The printed catalogues of special libraries (specialization in a subject(s) or form of material) can serve as a subject bibliography in the field of its specialization. These serve a very useful purpose. The additional advantage of such publications is that they also indicate the location of documents in the library concerned.

The extent of information provided varies. Besides usual bibliographic details, these may also be annotated or provided with abstracts. *Asian social science bibliography*, is an example of the first kind. *Chemical abstracts* belongs to the second kind.

4 LIMITATIONS

Most subject bibliographies become out of date soon after they are released. Those subject bibliographies which are not comprehensive in their coverage, often miss material in related fields. Even comprehensive bibliographies are usually strong in the languages known to the compiler of a bibliography.

5 PRESENT SITUATION

Subject bibliography is considered to be a weak link in bibliographic

control. This is especially true in the field of humanities and social sciences. There are many areas where subject bibliographies are not adequate. Much needs to be done. Different fields should be covered systematically.

6 REPRESENTATIVE EXAMPLES

Most indexing and abstracting services form a part of subject bibliographies. These will be dealt with in Chapters X and XXIII.

A few representative examples of subject bibliographies are described below:

61 Library Science

Bibliography of library economy: a classified index to the professional periodical literature in the English language relating to library economy, printing, methods of, publishing, copyright, bibliography, etc., from 1876 to 1920, by H.G.T. Canons, Chicago, American Library Association, 1927, revised edition based on the 1908 edition.

This bibliography indexes articles from English and American periodicals on librarianship, covering the period from 1876 to 1920. Only articles in the English language from 65 professional periodicals are listed.

The arrangement of the main sequence is classified. Within each specific topic, further arrangement is by chronological order. The subject index is given at the end. However, there is no author index.

This is a valuable bibliography for retrospective searches. It is continued by *Library literature*.

Indian library literature: an annotated bibliography by R.G. Prasher, New Delhi, Today and Tomorrow, 1971.

It is a classified list of Indian library literature particularly from 1955 onwards. Short annotations have been provided in some cases.

62 Science and Technology

ASLIB book list: a monthly list of recommended scientific and technical books with annotations, London, ASLIB, vol. 1-, 1935-, monthly.

The entries in main sequence are arranged according to UDC. The documents are categorized into four categories: A (for general readers), B (of intermediate technical standard for students' textbooks), C (of an advanced or highly technical character) and D (directories, dictionaries, handbooks, encyclopaedias and similar reference books). Broad subject index and author-title index are

provided for each issue. The indexes are cumulated annually.

This is a dependable, current subject bibliography, normally limited to books in the English language.

British scientific and technical books, 1935-52: a select list of recommended books published in Great Britain and the Commonwealth..., London, Clarke, 1956.

British scientific and technical books, 1953-57 . . . London, Clarke, 1960.

The above two volumes are largely based on the *ASLIB book list*. There are 7000 and 4000 items respectively listed in these, and no annotations are provided. There are four categories of documents, namely, *A, B, C* and *D*. A few marginal subjects like documentation, librarianship, psychology, etc., besides science and technology, are also covered. Publications like yearbooks, directories and most bibliographies are omitted.

The entries in the main sequences are arranged according to UDC. Author-title and subject indexes are also provided.

American scientific books, 1960/61-1964/65; a basic selection of scientific, technical and medical books as entered in the American book publishing record, New York, Bowker, 1962-66, annual.

These are annual listings which cumulate the entries from *American book publishing record*. The last volume covers the period 1964-65.

These are annotated lists, where entries in the main sequence are arranged by *Dewey decimal classification* followed by indexes.

This is a standard reference work for the period 1960-65. It supplements Hawkins' work, which covers the period up to 1956.

Scientific, medical and technical books published in the United States of America; a select list of titles in print, with annotations, edited by R.R. Hawkins, 2nd ed. (books published up to December 1956), Washington, National Research Council, 1958.

Prepared under the direction of the National Academy of Sciences, National Research Council's Committee on Bibliography of American Scientific and Technical Books, this is a bibliography which supplies descriptions of outstanding scientific, medical and technical books by citizens of the United States of America and Canada, published in the US and available for both domestic and foreign distribution. Those publications known to be out of print or about to go out of print were excluded.

Books published by the regular book trade dominate. However, monographs, symposia and papers published by American scientific and technical societies are covered to a large extent. Selected documents published by the national government are also included.

Approximately 8,000 titles are listed. Books published during 1953-56 predominate.

The main entry contains usual bibliographic details, contents or abridged contents and notes (to highlight unusual features). It contains a detailed table of contents. The entries in the main sequence are arranged in a classified order and, within a specific subject, are arranged alphabetically by author. Author and subject indexes are also provided

This is a well-established bibliography and book selection tool, for which subject consultants helped in the final selection.

63 Social Sciences

Asian social science bibliography, 1966-, Delhi, Vikas Publishing House, 1970- (Publisher varies).

This is a continuation of *Southern Asia social science bibliography* which was brought out by UNESCO Research Centre on Social and Economic Development in Southern Asia. The present volumes for 1966, 1967 and 1968 were prepared by the Institute of Economic Growth (Delhi), at the suggestion of UNESCO.

It is a regional social science bibliography covering reference materials on Asian countries like Afghanistan, Burma, Cambodia, Ceylon, India, Indonesia, Iran, Korea, Loas, Malaysia, Nepal, Pakistan. the Philippines, Singapore, Taiwan, Thailand and Vietnam. The fields covered include economics, sociology, social anthropology, social psychology, political science, social science and social data, education and communication, and demography.

The volume for 1966 (published in 1970) includes selective materials on Asian countries published in English not only within the country, but outside, covering books, articles and scholarly journals, or reports issued by government and other organizations. It covers 1972 entries from 400 journals.

The volume of 1967 (published in 1974) covers 2285 entries from 400 journals.

The entries are arranged classified-wise, followed by author, subject and geographical indexes. Most entries have been provided with annotations.

The third volume for 1968 includes 2705 entries, largely selective.

There is a considerable time-lag between the appearance of articles indexed and the release of the bibliography. The volume for 1968 was released in 1977. This is a highly useful subject bibliography covering social sciences.

London bibliography of the social sciences, London, London School

of Economics and Political Science, 1931-32, 4 volumes, supplements, 1934-1968.

This is a combined subject catalogue of several large social science libraries in London. The initial volumes contain lists of the collections of ten institutions as of 1929. However, in later supplements, the number of libraries was reduced. The most recent supplements list the holdings up to 1968 of two particularly strong collections in the London School of Economics, the British Library of Political and Economic Science and the Edward Fry Library of International Law. This subject bibliography is international in scope and records books, pamphlets and documents in many languages.

The entries are arranged alphabetically by subject in a detailed alphabetical scheme with many cross-references. There is also a classified list of the headings and sub-headings used to help in locating relevant entries. Author indexes are given in volume 4 (to vol. 1-3) and in volumes 5 and 6 but not in later volumes. Many cross-references are provided.

It provides brief information consisting of author, title (often abbreviated), pages, date, location and information on whether the work contains a bibliography. However, no annotations are provided.

This is the most extensive subject bibliography in the field of social sciences and it is updated by a *Monthly list of additions to the library* issued by the British Library of Political and Economic Science. This is a must for all large libraries and research workers in the social sciences.

International bibliography of historical sciences, 1926-, vol. 1-, Paris, Librairie Arman Colin, annual.

This is a selective and descriptive bibliography, covering books and articles in historical sciences. The term is used in a wider sense to include its constitutional, political, religious, cultural, economic and social aspects, and international relations, etc.

The entries are arranged according to a methodical and chronological scheme originally drawn up and established by the Bibliographical Commission of the International Committee of Historical Sciences, and has been revised only in the details. Within each division or sub-division, the works are listed in the alphabetical order of their authors. Name and geographical indexes are provided at the end.

This is an extremely useful current bibliography of historical publications.

64 *The Humanities*

Cambridge bibliography of English literature, edited by F.W. Bateson, Cambridge University Press, 1940·57, 5 volumes.

The first three volumes cover the period, 600 to 1900. The fourth volume is an index to these. The fifth is a supplement which lists publications on the study of English language and literature from 600 to 1900, which have appeared from 1940 to 1955.

This is a basic bibliography which covers old English, Middle English, Modern English and Latin literature of the British Isles. There is also a brief treatment of the English literature of the Dominions and India. There is incidental coverage of Welsh, Gaelic and Celtic material. American literature is excluded. The bibliography is broad in scope, and includes many writings from various subject fields like science, history etc., but is particularly strong in belles lettres and languages.

The entries are arranged chronologically, and within each period by literary forms like poetry, drama: periodicals, etc. However, under large class groups like history, philosophy, etc., further divisions are under forms and groups by special topics and by the individual authors dealt with.

The entries include usual bibliographic details, and brief but very fine notes are added frequently.

This is an indispensable subject bibliography for large and medium sized libraries, especially those concerned with English literature. It is also a must for academic libraries where English literature is taught and studied at parent institutions.

MLA International bibliography of books and articles on the modern languages and literatures, 1921-, New York, Modern Language Association of America, annual.

Beginning with listings for 1969, this bibliography appears in 4 volumes on an annual basis, separate from its parent journal, *PMLA.* Volume 1 contains section on General, English, American, Medieval and Neo-Latin, and Celtic literatures. Volume 2 includes sections on European, Asian, African and Latin-American literatures, and volume 3 is devoted to linguistics. Volume 4 contains list on pedagogy in the modern foreign languages.

In each volume *festschriften* and other analyzed collections are listed first. Individual entries grouped by sections are listed next. An author index produced by electronic data processing is given at the end of each volume.

This is an extremely useful annual bibliography in the field of modern languages and literatures, which makes an effort to include

every significant book and article within its scope. No cumulations are available.

There are a few subject bibliographies covering Indian languages. The one given below is described as one such example.

Hindi Sahitya: Aalochna granth-suchi (1947-1971), edited by Yashpal Mahajan, Delhi, Bharatiya Granth Niketan, 1971.

This is a subject bibliography with a select list of books on Hindi literature, literary criticism and linguistics.   ‹

The entries in the main sequence are arranged in a classified order, followed by author and title indexes in one sequence. The author and title indexes refer to the main entry for full bibliographic details by means of page numbers.

The main entries contain author's name, dates of the author, title, place of publication, publisher's name and year of publication, name of distributor and, if necessary, pages and price.

At the end a publishers list is given, which is very useful.

This is a useful bibliography mainly because, in the field of Hindi literature and language, there is a lack of bibliographic tools. Hindi literature is a vast field, and offers great scope to subject bibliographers.

7 CONCLUSION

The universal and the national bibliography forms a base for a subject bibliography. There are many countries where a national bibliography does not exist. In case of countries with national bibliographies, a complete current national bibliography is lacking. The same is true for retrospective national bibliography. There is no universal bibliography in the true sense. The printed catalogues of the great national libraries taken together can serve as a universal bibliography to some extent, and thus we may conclude that the base for a subject bibliography is weak. We should, therefore, not be surprised to find that subject bibliography is the weakest link in bibliographic control. There are only a few fields where subject bibliography is well organized. Chemistry is one such.

There is much work which remains to be done. We need a large variety of subject bibliographies at different levels to serve the varied requirements of different categories of users. Subject bibliography remains the weakest link in bibliographical control.   ·

FURTHER READING

RAY ASTBURY, *Bibliography and book production*, Oxford, Pergamon Press, 1967, pp. 164-72.

VITO J. BRENNI, *comp.* and *ed.*, *Essays on bibliography*, Metuchen, N.J., Scarecrow Press, 1975, pp. 268-318.

ROBERT L. COLLISON, *Bibliographies, subject and national*, 3rd ed., London, Crosby and Lockwood, 1968.

ROBERT B. DOWNS and FRANCES B. JENKINS, ed., *Bibliography; current state and future trends*, Urbana, University of Illinois Press, 1967, pp. 123-570.

BABBARA M. HALE, *Subject bibliography of the social sciences and humanities*, New York, Pergamon Press, 1970.

C.D. NEEDHAM and E. HERMAN, ed., *Study of subject bibliography with special reference to the social sciences*, School of Library and Information Service, University of Maryland, 1970.

S. R. RANGANATHAN, *Reference service and bibliography*, Madras, Madras Library Association, 1940, Vol. 1, pp. 502-74.

22 INDEXING SERVICES

1 INDEX

A N index is "a systematic guide to the text of any reading matter or to the contents of other collected documentary material, comprising a series of entries, with headings arranged in alphabetical or other chosen order, and with references to show where each item indexed is located."[1] A similar definition of index has been given by Bonn; according to him, "An index is a detailed alphabetical list of the names, terms, topics, places, formulae, numbers, or other significant items in a completed work (such as a book, set, or bound journal) with exact page references to material discussed in that work."[2] Thus, an index is a list arranged systematically, providing enough details about each item so that it can be identified and traced. It may be published separately or form part of another work. Usually, an index is arranged alphabetically but may sometimes be arranged chronologically, geographically, numerically or in any other suitable manner, depending upon the requirements.

2 DISTINCTION BETWEEN AN INDEX AND A BIBLIOGRAPHY

A bibliography is a list of references to sources relating to a given subject or person whereas an index is limited to a book, a set or a bound journal. A bibliography, though not limited in this respect, may be limited with regard to subject coverage, area of coverage, time, etc. That is to say, a good bibliography attempts to cover literature within defined limits, whereby making retrospective search for literature easier.

[1]British Standards Institution, *Recommendations for the preparation of indexes for books—periodicals and other publications*, London, 1964 (B.S. 3700: 1964), p. 6.

[2]George S. Bonn, "Literature of science and technology", *McGraw-Hill encyclopedia of science and technology*, New York, McGraw-Hill, 1971, vol. 7, pp. 613-14.

3 INDEXING PERIODICAL

An indexing periodical is a regularly-issued compilation of titles of articles that appear in current primary source journals. Generally, titles of new books, pamphlets, etc., are also included.

4 EVALUATION OF INDEX TO PERIODICALS

The checklist for an evaluation of an index to periodicals for the purpose of its study should consist of authority, scope, arrangement, entries, items of information, special features and drawbacks, format and conclusion.

41 Authority
Which is the sponsoring body? Is it recognized? Has the indexing been done by a competent person?

42 Scope
(*a*) What are the limitations with regard to the subject (is it broad or specialized?), languages (are foreign periodicals covered?), place of origin of periodicals and length of period covered (does it index current or retrospective issues of periodicals?) for the periodical(s) indexed.

(*b*) What is the number of periodicals indexed?

What are the kinds of periodicals (whether established or likely to be of permanent interest to the users, whether they are of a popular, technical or scholarly nature)? Are they fully representative of the field? Is the choice of periodicals biased in any way?

(*c*) Does the index include material other than articles in periodicals (e.g., pamphlets, documents, dissertations, patents, books etc?)

Is it a current indexing service or a retrospective one?

43 Arrangement
Alphabetical:

(*a*) Dictionary-wise (author, title, subject entries and references arranged in a single sequence)

(*b*) Author-wise

(*c*) Subject-wise

(*d*) Author and subject-wise

Classified:

In case the arrangement is classified, then it is essential to know if there is a table of contents and an alphabetical index to the classified part.

44 Entries

Which kinds of entries are provided? Do they include author and subject entries and cross references? Are these adequate?

Do they give a list of periodicals indexed?

45 Items of Information

Do all the entries provide full information like author's name, full title of the article, title of periodical (is the form intelligible?), volume, year, pagination, information about illustrations, bibliographies, etc.? In case of materials other than articles in periodicals, the information would be modified suitably. For instance, in the case of a book, the minimum desirable information should consist of author's name, full title, place of publication, publisher's name, year of publication, information about illustrations, bibliographies, etc.

46 Special Features and Drawbacks

What is the frequency of the publication?

How often is it cumulated? Are larger cumulations made available? Is the publication brought out promptly (timeliness)?

Are all the articles in the periodical covered, indexed? If not, then what is the basis of selection?

What is the quality of indexing? (What kind of subject headings have been used? Does it use indexing in depth?) What is the degree of accuracy of the entries? Are the entries completely reliable?

State whether it is a unique publication. Compare it with other services in the same field and determine overlap and other features. (Is there any special emphasis?)

Is the indexing service convenient, easy and simple to use?

47 Format

Are the headings bold enough to stand out clearly? Are the type-faces clear and legible? Has a suitable difference been made between different types of headings or not?

48 Conclusion

Conclusion should include overall judgement about the work. Should it be recommended for a library or not? If so, indicate the kind of library which will benefit-most.

5 TYPES OF INDEXES

The following types of indexes may be recognized from the point of view of a reference librarian:

    (*i*) Book indexes,

    (*ii*) Indexes to collections,

    (*iii*) Periodical indexes, and

    (*iv*) Newspaper indexes.

Here we shall confine ourselves to the last three types of indexes because the first type falls outside our purview. (The index to this book represents an example of a book index).

51 Indexes to Collections

These index collections of poems, fiction, plays, songs, essays, stories, biographies, etc. One such example is described below:

Essay and general literature index, 1900-33, New York, Wilson, 1934. Supplements: (*a*) seven-year cumulations, 1934-40, 1941-47, 1948-54; (*b*) five-year cumulations, 1955-59, 1960-64, 1965-69, 1970-74, published semi-annually.

This is an author, subject and, when necessary, title index to collections of essays and other composite works, which have reference value in different areas of knowledge, particularly the humanities and social sciences. However, literary criticism is given special emphasis. Authors of all periods, subjects and nationalities are included, although only twentieth century publications are indexed. The main entry is under the author's name and includes his works and works on him.

This index is published semi-annually including a bound-volume, annual cumulation. Permanent five-year cumulations are brought out regularly.

This indexing service provides a large amount of analytical entries relating to biography and criticism of individuals, to the extent that it also often serves as an index of biography.

52 Periodical Indexes

Broadly speaking, these are of three types, namely, general indexes, subject indexes and indexes to single periodicals.

521 GENERAL INDEXES

General indexes cover many periodicals in a wide field of knowledge. The *Readers' guide to periodical literature* is an example of a general index.

Indexes covering a number of titles usually appear in the form of alphabetico-subject indexes to the contents of the predetermined list of periodicals. A few examples of general indexes including those in broad fields like the social sciences, science and technology and the humanities are described on the next page.

Applied science and technology index, New York, Wilson, 1913-, monthly, except July.

From 1913 to 1957, it was entitled *Industrial arts index*. In 1958 it was split into this service and *Business periodicals index*, as well. It is intended primarily for the layman, although not exclusively. It can be used by specialists who may be seeking a retrospective article on this or that subject. Layman can use it to seek background and technical information, normally when currency is not considered important.

It analyses approximately 297 periodicals in the English language in the field of aeronautics and space science, chemistry, computer technology and applications, construction industry, energy resources and research, fire and fire prevention, food and food industry, geology, machinery, mathematics, mineralogy, metallurgy, oceanography, petroleum and gas, physics, plastics, textile industry and fabrics, transportation, engineering and other industrial and mechanical arts. The engineering disciplines covered include chemical, civil, electric and telecommunications, environmental, industrial, mining, mechanical, and nuclear engineering. The periodicals are chosen by subscribers to the index.

This is a cumulative subject index to periodical literature published monthly, except for July. No author entries are provided. Quarterly cumulations are brought out. Permanent, bound annual cumulations have also been issued since 1958.

This indexing service, like many other Wilson indexes, is sold on a service basis.

Biological and agricultural index, 1964-, New York, Wilson, 1964-, monthly, except August.

The above is a cumulative subject index to approximately 188 periodicals in the English language in the areas of biology, agriculture and related sciences. Articles are indexed by both author and subject in a single alphabet. Specific subject headings and a large number of cross-references are provided to help a user locate entries in a specific subject, as well as in related fields. Book reviews are indexed by author in a separate section, under the subject heading, "Book reviews."

Complete bibliographic information is provided in each entry.

This index is brought out as a monthly, quarterly cumulations, and permanent, bound annual cumulations are also published. The service is sold on the service basis.

Many of the basic articles indexed in *BAI* are abstracted in *Biological abstracts*. *BAI* a useful service.

British humanities index, 1962-, London, Library Association, 1963-.

The index covers almost 400 British journals and is mainly intended to serve the general reader. It was formerly 'The subject index to periodicals.'

British technology index; a current subject guide to articles in British technical journals, London, Library Association, 1962-, vol. 1-, monthly (11 monthly issues and a bound annual volume).

BTI is a current subject guide to British technical journals in the field of applied science, engineering and manufacturing technology. It aims to provide access to technical papers published in about 320 British journals. Articles are included between three and seven weeks of their original publication in most cases.

BTI is highly useful for tracing and recall of specific and recent information in the field of applied science, engineering and manufacturing technology.

Bulletin of the Public Affairs Information Service (PAIS): a selective subject list of the latest books, pamphlets, government publications, reports of public and private agencies and periodical articles relating to economic and social conditions, public administration and international relations, published in English throughout the world, 1st-, New York, Public Affairs Information Service, 1915-, vol. 1-, weekly, with annual cumulations.

PAIS is an authoritative indexing service, compiled by a committee of American librarians. Over a thousand periodicals published in English throughout the world are covered on a selective basis each year. The scope of the service is indicated in the subtitle. It is a subject index to current literature covering books, documents, pamphlets, reports of public and private agencies, articles in periodicals, multigraphed material, etc.

PAIS Bulletin is a unique bibliographical tool which in a way can be placed along periodical indexes.

It is an index to publications in all forms relating to public affairs by which is meant, roughly, any political, social or economic topic that relates to matters of public discussion or policy. There are no author indexes and no cumulations beyond annual volumes are brought out.

It serves as an aid in selection and acquisition of materials and as an identification tool for publications likely to be found in the collections of libraries. It is used widely in public and academic libraries in USA.

PAIS is a very useful index for political science, economics, socio-

logy, public administration, international relations, etc;, indispensable to a large library.

General science index, New York, Wilson, 1978-. Indexes 89 periodicals in general science in English. It is designed to serve public, high school, junior college and college libraries.

Guide to Indian periodical literature: social sciences and humanities, vol. 1-, 1964-, Gurgaon, Indian Documentation Service, printed quarterly.

This is an alphabetical subject-author index to articles in the social sciences and humanities appearing in Indian periodicals. It is an extremely useful service especially because of the regularity of its publication programme. It covers 300 Indian periodicals and cumulates annually. It makes an attempt to be comprehensive, though in practice many items thought to be less important are omitted. The time-lag between the publication of articles and their inclusion in the *Guide* is between six to nine months. The annual cumulative volumes have also been appearing late.

Humanities index, New York, Wilson, 1974-, vol. 1-, quarterly.

Humanities index is one of the two new indexes (the other being *social sciences index*) which has replaced the *Social sciences and Humanities index*.

This quarterly indexing service indexes 260 periodicals in the field of humanities--including archeology, area studies and classical studies, folklore literature, language, music, philosophy, history, religion, etc.

Articles are indexed by both author and subject in a single alphabet. Specific subject headings and a large number of cross-references are provided to facilitate the location of entries in a specific subject as well as those in related areas. Book reviews are indexed by author in a separate section.

Complete bibliographic information is provided in each entry.

This publication is published as a quarterly and permanent, bound annual cumulations are brought out. Like many Wilson indexing services it is also sold on the service basis. It is perhaps the most widely used service in American libraries for identification of scholarly literature. However, it is not comprehensive enough for the search of literature in any discipline covered by it.

Index India, a quarterly documentation list of India on material in English, combining in one sequence an Indian newspaper index; index to Indian periodicals; index to foreign periodicals; index to composite publications; index to the biographical profiles, index to book reviews, index to theses and dissertations, cumulated annually, Jaipur,

Rajasthan University Library, 1967-, printed.

It is a quarterly documentation list, which is selective in nature and covers 1,000 publications. It attempts to cover literature on India in the fields of social sciences and humanities, excluding law reports, and material on individual firms and banks. The time-lag is about 18 months. From the fourth quarterly issue of the second volume, a supplement, *Books on India* has also been started.

Indian science index, 1975-, New Delhi, Indian Documentation Service, 1976-, annual.

This is a subject index to articles and other reading material such as research papers, research notes, conference/seminar/symposia proceedings, transactions of societies, significant editorials, news and book reviews of Indian and foreign books, from 286 selected Indian periodicals on all disciplines of science, technology and medicine. The list of periodical indexed has also been given. The second volume lists over 16,000 articles.

It follows dictionary pattern using word for word basis. See references and see also references have also been provided to link the related entries together and to provide a lead to users from general to the specific subject headings under which articles are listed.

Each entry contains title of article, name of author, abbreviated title of the journal, volume and issue number, page number and other information such as illustrations, bibliography, etc.

. The subject headings have been prepared with the help of *US Library of Congress subject-headings* and other specialised subject lists. An additional feature of second volume is that about 600 books on science, technology and medicine have been listed in a separate section under broad subjects. This is a good effort but there is need for better subject-analysis. This work will help in achieving bibliographic control of scientific literature published in India.

Readers' guide to periodical literature, 1900-, New York, Wilson, 1905-, vol. 1-, published semi-monthly from September to June and monthly in February, July and August.

Readers' guide indexes approximately 173 periodicals of general interest published in the United States. The periodicals indexed are selected by subscribers to *Readers' guide* on the basis of their general usefulness in reference work, representing important subject fields.

: Author, title (title entries are included for stories only) and subject entries are given in one alphabet. Each entry contains all the necessary information required for finding a given article, giving exact date,

inclusive paging, illustrations, portraits, etc.

This publication is cumulated on a quarterly and annual basis. The quality of indexing is high because it is done by qualified and experienced indexers.

This is an excellent indexing service of its type, which aims to index US periodicals of a broad, general, non-technical and popular nature, providing a service which covers all important scientific as well as other subject fields.

Social sciences index, New York, Wilson, 1974-, vol. 1-, quarterly.

This is one of the two indexes (the other being *Humanities index*) which have replaced *Social sciences and Humanities index*.

This quarterly indexing service indexes 263 periodicals in the field of social sciences.

Articles are indexed by both author and subject in a single alphabet. Specific subject headings and a large number of cross-references are provided to facilitate location of entries on a specific subject as well as in related areas. Book reviews are indexed by author, in a separate section.

Complete bibliographic information is given in each entry.

It is published as a quarterly and permanent bound annual cumulations are brought out. Like many other Wilson indexing services it is sold on a service basis.

This service is perhaps the most widely used service in American libraries for identification of scholarly literature. However like the *Humanities index* it is not comprehensive enough for the search of literature in any discipline (such as anthropology, area studies, economics, environmental science, geography, law and criminology, medical sciences, political science, psychology, public administration, sociology) covered by it.

5211 Citation Indexes

These cite primary research articles on a subject by author and title. Under each citation are grouped all those contributions which have referred to the primary article. Each of an author's cited works along with its citing authors and their papers, is arranged in chronological order. This means that a researcher can easily trace developments since the publication of a particular article, by identifying the authors and their papers related to the primary work.

Citation indexing is mainly the contribution of Eugene Garfield of the Institute for Scientific Information, Philadelphia to the field of indexing. The failure of the schemes of classification to meet the challenge of proliferating knowledge is the basis of the new method.

The principle of citation indexing has been derived from *Shepard's citations*, a legal tool that has been used in the United States since 1873. By looking up the case number for any given decision in *Shepard's citations*, a lawyer can locate references to all subsequent citing cases. The *Science citation index* (1963), *Art and Humanities citation index* and the *Social sciences citation index* (1973) published by the Institute for Scientific Information are the best examples of the kind.

Citation indexing is based on the assumption that (1) an author's references (citations) to previously published material indicate *subject relationship* between his current article and the older publications, and (2) articles that cite the same publications usually have subject relationships with each other. Cited items can be books, articles, letters, theses, editorials and other forms of published material.

The concept on which citation indexing is based cuts across the limitations of traditional schemes of classification. It is based on the relation of every significant word in the title of an article or book and links the same to other publications with similar terms occurring in their titles. The permuted pairs are further linked to the names of authors who used them in the titles of their articles. It is thus possible to approach a subject through the author as well as medium of the title, by linking the two and viewing them as chains in the subject linkage.

It is a novel concept because it treats the author as a subject and builds up a chain that is unending for all practical purposes. It is built on the sound premise that in this age of interdisciplinary and multidisciplinary research, no scholar can afford to confine himself to his narrow field of specialization. Another advantage is its selective comprehensiveness in coverage based on Bradford's Law, which states that a small percentage of periodical publications account for a large percentage of significant literature in any given field of science. According to one reliable estimate a thousand journals account for ninety per cent of significant literature published in the world. Both *Science* and *Social sciences citation* indexes cover over 1000 periodical publications. *Art and Humanities citation index covers* over 800 journals. Another idea of comprehensiveness can be had from the fact that *Social sciences* alone indexes more than 70,000 new articles and monographs each year.

The major defect lies in its inability to be selective. Quality is in danger of being sacrificed at the altar of quantity because of the inherent inability of any mechanical system to be discriminating. Its failure and success also depends on the use of proper terms in the

title. The problem is more serious in respect of the humanities and social sciences, due to their imprecise terminology. All said and done citation indexing is a great advance on existing systems and is a welcome response to the Niagra of proliferating literature.

A brief description of *Science citation index* in the light of the above remarks is given below:

Science citation index, Philadelphia. Institute for Scientific Information, 1963-, quarterly, cumulated annually and quinquennially.

SCI analyzes 3000 journals, reports, patents, monographs and books. It covers the most important and significant scientific and technical journals in most disciplines.

SCI consists of three separate indexes, though these are related. They include citation index, source index and the permuterm subject index. All of them are published quarterly for the first three quarters of the year. Indexes belonging to the fourth quarter are incorporated in the annual cumulation for each index.

The *Citation index* provides the following entry-points to the literature:

(1) Corporate Index Section: under the name of each organization, citation for all items attributed to the organization and published during the period indexed is to be found.

(2) Citation Index: arranged alphabetically by cited author and within this the arrangement is by chronology by cited year.

(3) Source Index: A complete author index.

(4) Permuterm Subject Index: An alphabetic list of significant words extracted from the titles of all source items processed for the *Citation index*.

In a nutshell, the fundamental question answered quickly through the *Citation index* is where and by whom has a paper been cited in the literature? Citation indices provide a new approach to bibliographic reference based not on the principle of subject affinity but on the assumption that the writings of an author have an underlying unity and can form the basis for an initial literature survey.

Source index is arranged alphabetically by source-author. Source-author is the author of an item citing a particular reference work. Entries provide all co-authors, full title of the citing (source) items, title of periodical, volume, issue, page, year, type of item and number of references in the bibliography of the source item.

Permuterm subject index is produced by a computer which permutes all significant words within each title and subtitle of every item included in the source index. It uses the searching technique of following up references cited in relevant papers.

SCI tells us for a given specific work, "what has happened since." Thus it provides (a) for each cited reference, subsequent current works, which cite it, (b) what more recent works cite specific, older works, and (c) subject approach by means of various words or descriptors representative of the main subject matter of an article. The data base from which volumes are compiled is maintained on magnetic tapes and is updated on a weekly basis. These tapes are manipulated by computer to produce various kinds of lists.

It is claimed that this form of indexing is able to identify a specific work unambiguously and, thereby, the subject concepts discussed in it are also identified. Thus *SCI* enables a user to trace a new application, improvements of theories, instruments, chemicals, etc.

Social sciences citation index, Philadelphia, Institute for Scientific Information, 1973-, published in June and October with annual cumulation, within four months of the end of each year.

SSCI indexes every article and every significant editorial item from every issue of over one thousand of the most important social science periodicals. It also covers another 2200 periodicals on a selective basis, indexing only those articles which are relevant to the social sciences. Besides, it also covers many important monographs. Like *SCI*, it also contains three separate indexes, namely, source index, citation index, and the permuterm subject index. Its arrangement follows *SCI* and comments given for *SCI* are equally applicable for *SSCI*.

It is certainly an invaluable tool for social scientists but its cost is too high for Indian libraries.

Arts and Humanities citation index. Phil., Pa, Institute for Scientific Information.

Covers over 1000 journals in literature, history, languages, religion, philosophy, drama/theatre, art, music and other related fields. Indexes articles, book reviews, fiction, poetry and correspondence. Provides author, title-word and subject approach. Allows to start a "search with an earlier work central to your topic and find newer items that have cited (or referenced) it and are thus likely to be on the same subject. When a work of art (a painting, musical composition, film, etc.) is the basic subject of an article it too appears as an indexing term in *A & H C I's* index."

522 SUBJECT INDEXES

These are those indexes which cover several periodicals. Very often these also include new books, pamphlets, conference proceedings, reports, etc. The subject is restricted to a narrow field. *Education*

index and *Library literature* are good examples of subject indexes.

A few important subject indexes are described below:

Library literature; an index to library and information science, 1921/32-, New York, Wilson, 1934-, published six times a year. Bound annual volumes and two-year cumulated volumes are also published.

It indexes current materials on library and information science. It indexes 223 periodicals in library and information science, published all over the world. Besides, it covers, selectively, non-library science periodicals covered by other Wilson indexes. Books, pamphlets, films, filmstrips, microcards, microfilms, library school theses and research papers dealing with library and information science are also indexed. However, microcards and microforms of material which has been published in printed form are excluded.

Author and subject entries are arranged alphabetically in a single sequence.

Like many other Wilson indexes, it is sold on a service basis.

Conference proceedings and collective works are analysed and indexed. Obituaries are also indexed. Regular editorial departments of periodicals are indexed by blanket entries which appear only once in any annual cumulation period. Book reviews cited are listed under the book's main entry. A checklist of monographs cited for the first time is included as a regular feature of the monthly issues.

Library literature is a must for students, teachers and researchers in library and information science.

Indian library literature; an annotated bibliography, by R.G. Prasher, New Delhi, Today and Tomorrow, 1971.

This is a classified list of Indian literature on library science particularly from 1955 onwards. Annotations have been provided in some cases.

In 1950 an International Committee for Social Sciences Documentation (ICSSD) was organized under the sponsorship of UNESCO. The outcome of the Committee's work was a group of four annual bibliographies covering the fields of political science, economics, sociology and cultural anthropology on a worldwide basis. These were issued under the series title, "International bibliography of the social sciences." These bibliographies are, *International bibliography of sociology,* 1951-, *International bibliography of political science,* 1952-, *International bibliography of economics,* 1952-, *International bibliography of social and cultural anthropology,* 1955-, (the years indicate the initial year of coverage). They are quite similar in content and format. Each bibliography attempts

to be a complete listing of scholarly books and periodical articles that have appeared during a given year. The entries provide minimal information about the works listed and have not been provided with annotations. Reviews of books however, are often cited. The bibliographies appear with an interval of about two years following the end of the year covered. Thus they are rather slow to appear.

International bibliography of social and cultural anthropology, vol. 1-, 1955-, prepared by the International Committee for Social Sciences Documentation in cooperation with the International Congress of Anthropological and Ethnological Sciences, London, Ta. istock; Chicago, Aldine, 1958-, vol. 1-, annual (International bibliography of the social sciences, publisher varies).

Attempts {to list scientific works in many languages from different countries, covering books, periodical articles and duplicated materials, but not unpublished typed theses, articles appearing in the daily press, etc. Most branches of anthropology are covered, physical anthropology being the most notable exception.

The main entries are arranged in classified order based on a special scheme of classification. Indexes by author and subject (in English and French) are provided.

This is an authoritative bibliography on social and cultural anthropology.

International bibliography of economics, 1952-, London. Tavistock; Chicago, Aldine, 1955-, vol. 1-, annual (International bibliography of social sciences, publisher varies).

This bibliography has been prepared by the International Committee for Social Science Information and Documentation. It is an extensive listing of books, pamphlets, periodical articles and official government publications, in various languages, including Slavic and Asian, that have appeared during a given year. However, unpublished works and articles published in the daily press are excluded. Special attention is given to the official publications of national governments.

The main entries are arranged in a classified order based on a special scheme of classification. Indexes by author and subject (separate subject indexes in English and French) are provided. A list of journals along with their abbreviations is given at the beginning.

This is a truly authoritative international bibliography in economics, a must for students and scholars in this field.

International bibliography of political science, 1952-, London, Tavistock; Chicago, Aldine, 1954-, vol. 1-, annual (International

bibliography of the social sciences, publisher varies).

This bibliography is an extensive listing of books, pamphlets, periodical articles and official government publications in various languages, including Slavic and Asian, that have appeared during a given year.

The main entries are arranged in a classified order based on a special scheme of classification. Indexes by author and subject (in English and French) are provided.

International bibliography of sociology, 1951-, London, Tavistock; Chicago, Aldine, 1952-, annual (International bibliography of the social sciences, publisher varies).

This bibliography is an extensive listing of books, pamphlets, periodical articles and official government publications in many languages including Slavic and Asian, that have appeared during a given year. All branches of sociology are covered with the exception of social psychology and demography.

The main entries are arranged in a classified order based on a special scheme of classification. Indexes by author and subject (in English and French) are provided.

Bibliography of agriculture, Washington, D. C., Government Printing Office, 1942-, monthly, publisher varies.

From 1971 to 1974, it was published by Macmillan Information, a division of the Macmillan Publishing Company, which printed it with the help of computerized indexing system. However, since January 1975, the publication has been taken over by Oryx Press.

This is the most important indexing service in the field of agriculture and allied areas. It covers journal articles, pamphlets, government documents, special reports, etc. US National Agricultural Library (NAL) produces a computer tape containing the records of documents catalogued or indexed for its CAIN (CAtaloging INdexing System) computer system. From the tape, different products such as catalogue cards for NAL and *Bibliography of agriculture* are produced. Each monthly issue of the Bibliography contains about 10,000 main entries. It is arranged under 76 main subject headings. Four indexes, namely, subject index, geographic index, corporate index and personal author index are provided.

Chemical titles, Easten, Pa., American Chemical Society, 1960-, biweekly.

Chemical titles is an alerting service issued every two weeks, reporting the titles of articles of chemical interest published recently. The aim being to keep the chemists and chemical engineers well informed about the advances in their fields of specialization by

alerting them regarding current information. It indexes approximately 700 chemically oriented periodicals. Each title covered in CT is indexed by author and keyword-in-context. Besides, each title is also listed in bibliography section, with reference to the scientific journal, where it appears.

This is a highly useful indexing periodical, which indexes most recent chemical research. It attempts to fill a gap between the publication of an article and the appearance of the ·abstract in *Chemical abstracts* for the same.

Index medicus, Washington, National Library of Medicine, 1960-, monthly.

This is compiled at the National Library of Medicine, (Bethesda, Maryland). The National Library of Medicine began publication of the new series of *Index medicus* in 1960. It indexes about 150,000 article titles every year from over 2250 biomedical journals, by author and subject, giving a citation under each entry.

The monthly issues are cumulated on an annual basis into the *Cumulated index medicus*.

Index medicus is published in monthly parts, each part being divided into subject and author, alphabetically. Full citations are provided under each entry. In the subject section, entries are grouped according to the languages of the articles, with English-language articles getting first place, followed by citations for articles in other languages, arranged alphabetically by language.

Titles in foreign languages are translated into English and shown in square brackets along with indications about the language. Each article indexed is given as many subject headings as required.

A separate bibliography of medical reviews is provided. Medical subject headings are given in part 2 of January issue.

This service is completely arranged and printed by a computer thus reducing the time-lag considerably. It is an excellent indexing periodical.

523 Indexes to Individual Periodicals

Indexes to individual periodicals vary in quality and completeness. They are usually issued on an annual basis. If a given periodical does not issue its index, a librarian may have to prepare one on his own.

53 Newspaper Indexes

These are generally of two types: (*i*) indexing many newspapers and (*ii*) indexing a single newspaper. *Indian news index* is an example

of the first and *Index to the Times of India* is an example of the second

Indian press index, Delhi, Delhi Library Association, 1968-, monthly.

IPI is a monthly journal of the Delhi Library Association, which covers 25 daily English newspapers in India and indexes all signed and unsigned articles, special write-ups, editorials and important statements and letters to the editor.

A separate quarterly supplement to the index, covering the book reviews published in all newspapers is also brought out.

There is a considerable time-lag of 18 months, which reduces its usefulness.

The number of entries included in *IPI* is enormous, as shown below:

Volume	Period	Number of entries
1	April 1968—March 1969	36153
2	April 1969—March 1970	40557
3	April 1970—March 1971	41185
4	April 1971—March 1972	39795
5	April 1972—March 1973	38054
6	April 1973—March 1974	29858
7	April 1974—March 1975	17,766
8	April 1975—March 1976	22654
9	April 1976—March 1977	35,019

The *Indian press index* should be regarded as an important contribution to the field of documentation of Indian newspapers. It is a unique publication of its kind and its absence was a handicap to Indian scholars.

Index to the Times of India, Bombay, 1973-, Bombay, Microfilm and Index Service, Reference Department, Times of India, 1974-, three times a year.

The *New York Times* and the *Times* (London) are recognized as leading English newspapers of the world. Their value as journals of records has been enhanced by the fact that they are accessible to scholars because of the index volumes cumulated on an annual basis. The *Times index* is available in two forms, namely, *The Times index* (monthly) and *The Times index* (cumulative annual). The monthly appears about 5 weeks after the end of the month. There is an index to all issues of *the Times* since 1790. Since 1973, it has included entries for the *Sunday Times*, the *Times literary supplement*, the *Times educational supplement* and the *Times higher education supplement*. The *Index to the Times of India*, beginning with 1973, is a welcome

addition to the family. Patterned after the *Index to the Times* it will be published in three volumes, annually.

The index relates to all news items, editorials, articles and letters to the editor which appear in the paper's Bombay city edition. The first volume covers the period January-April 1973 and contains 36,000 entries which are arranged under personal and corporate names and subject headings, broadly grouped under major topics. Entries are made, for example, under the States. There are also subjects grouped under geographical areas. The cross-references and multiple entries have been extensively used, with clear preference for the specific over the general *see* references. The basic order of arranging heading is alphabetical, word by word, alphabetting letter by letter within the word. Entries can be located by date, page and column reference. A glance at the index, will enable one to do a news analysis of the contents. Most of the news pertains to international developments and political development in India. The coverage of news other than political is insubstantial. Cultural news, especially, is insignificant. The utility of the publication will be enhanced after the passage of time because of its cumulative effect. Until then, the index has only contemporary significance.

The importance of the publication lies in the fact that it is the only one of its kind in this country, barring the *Indian press index* published by the Delhi Library Association and a few other sporadic efforts made so far. The unique nature of the *Index to the Times of India* is due to the fact of its being an index to a single newspaper and not several publications. Furthermore, the publication has the backing of a foremost publishing house, thus assuring its continuity. It needs to be improved by giving it a professional touch by introducing the latest techniques of indexing perfected by documentalists. There is a considerable time-lag in its publication programme, which needs to be reduced.

6 CONCLUSION

A study of indexing services shows the variety of services offered in different fields. These play a very important role in the growth and development of different disciplines. Over the years, this kind of publication has improved a great deal, mainly due to the application of computers. However, much remains to be achieved. It is also to be noted that indexes and indexing periodicals are becoming costlier with the result that many libraries cannot afford to purchase many of the services. This is certainly the case with libraries in developing

countries. We may take the examples of *Science citation index* and *Social science citation index*, which are beyond the reach of most libraries. However, citation indexes open a new vista in the field of indexing. They provide a new approach to meet the requirements of research scholars.

FURTHER READING

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23 ABSTRACTING SERVICES

0 INTRODUCTION

DUE to the increase in available literature, an average scholar is usually unable to keep himself up-to-date with or sometimes even keep track of documents or information in his field. It is in this respect that abstracting services can play a very important role in keeping him well informed. They help in bringing information to the notice of those who need it rather quickly, and are extremely useful tools.

1 TYPES OF ABSTRACTS

The main difference between indexing and abstracting services lies in form. In the latter, an abstract is added. An abstract is "the terse presentation in (as far as possible) the author's own language, of all the points made in the same order as in the original piece of primary documentary information—that can be a book, a research report, a periodical article, a speech, the proceedings of a conference, an interview, etc."[1] According to Maizell and others, "An *abstract*, simply defined, is a condensation that presents succinctly, the objectives, scope, and findings of a document. This information is usually conveyed together with an indexing system, which further helps to identify document content. An abstract, as a rule, is aimed at a specific group of users who either may not have easy access to the original document."[2] In simple words, an abstract is a summary of a document. Adequate bibliographic details are provided so that one can trace the document. The concerned document may be a book, an article from a periodical or some other form of recorded knowledge.

There are two major kinds of abstracts, namely, indicative and informative.

[1]Robert L. Collison, *Abstract and abstracting services*, Santa Barbara, California, American Bibliographical Centre-Clio Press, 1971, p. 3.
[2]Robert E. Maizell, *et al.*, *Abstracting scientific and technical literature*, New York, Wiley-Interscience, 1971, p. 1.

"Indicative abstracts merely tell briefly what the document is about."[3]

It summarizes the contents in brief, indicating the scope and content of the documents. It is a short abstract written so that a reader is able to decide for himself whether or not to read the original document. This kind of abstract cannot serve as a substitute for the original article. However, it is very useful for providing current awareness services.

"Informative abstracts are longer and present the essential data and conclusions so that the reader has no need to refer to the original document."[4]

An informative abstract, usually contains scope, purpose, methods used, kind of treatment, results or findings, conclusion, or interpretation of the results obtained by the author. Informative abstract is more popular and more used as well as more important than indicative abstract. However indicative abstract can be prepared in a shorter time and is economical. It meets the requirements of generalists, but experience shows that specialists prefer informative abstracts.

On the basis of informative abstract, a reader can decide whether or not the given contribution is a basic and primary one.

However, an informative abstract is no substitute for the original document. Sometimes, this kind of abstract may serve the purpose to the extent that one may not be required to consult the original document. In practice, it is observed that the distinction between the two kinds of abstracts is not sharp enough.

Main points, methodology, argument, result and conclusions are usually given in a good abstract. The length usually varies between 50 and 150 words.

Example of an informative abstract

23975d. **Intervalence transfer in unsymmetrical, ligand-bridged dimeric complexes or ruthenium.** Callalhan Robert W.; Brown, Gilbert M.; Meyer, Thomas J. (Dep. Chem. Univ. North Carolina, Chapel Hill, N.C.) *J. Am. Chem. Soc.* 1974, 96 (25), 7829 (Eng.). For the $[(NH_3)_5 Ru^{III} LRu^{II} [Cl (bipy)_5]^{1+} \rightarrow [NH_3)_5 Ru^{II} LRu^{III} X (bipy)_5]^{1+}$ transition (bipy=2,2'-bipyridine; L. (bridging ligand)-pyrazine, 4.4'-bipyridine, *trans*-1,2-bis(4-pyridyl)e thylene, or 1,2-bis (4-pyridyl) methane; $X=Cl$, NO_2), the halfwidths, intensities, and solvent dependences of the intervalence transfer (IT) band in

[3]*Ibid.*, p. 47.
[4]*Ibid.*, p. 47.

the near-ir spectra agree with values predicted by equations of N.S. Hush (1967). The properties of the IT transitions are dependent on both bridging and nonbridging ligand effects. The extent of metal-metal interaction and rates of thermal electron transfer between metal centers in the mixed-valence ion can be controlled in a systematic way by varying these mol. features. Voltammetry studies of the complexes are also discussed.

Example of an indicative abstract

Nature, vol. 273. no. 5658, 11 May 1978.

High sedimentation rates and variable dispersal patterns in the Western Hellenic trench. Daniel J. Stanley, etc.

The relationship between sedimentation and tectonics in island or settings is a close one but remains poorly understood. A sedimentological investigation of the Western Hellenic Trench has revealed some of the highest sedimentation rates measured in the Mediterranean sea. The complex structured evolution and physiography of this region have given rise to a more complicated lithofacies than that reported in most trench models.

Usually two types of abstracts are recognized, either indicative or informative. "One sometimes hears mention of a third variety, critical abstracts, and even of a fourth, telegraphic abstracts, but it is doubtful whether these types can be called true forms of abstract, since there is almost universal agreement, that an abstract loses much of its value by being critical or telegraphic and, in any case, the former tends more to be review rather than an abstract."[5]

In addition to above types, there are three terms which are used to refer to abstracts in general, namely, discipline-oriented abstracts; slanted abstracts; mission-oriented abstracts. First term refers to an abstract prepared for an abstracting service concerned with a particular branch of knowledge (*e.g., Physics abstracts, Chemical abstracts*). The second one lays emphasis only on the subject-oriented part or portion of the concerned document. Such an abstract is meant to serve the specific requirements of an organization. An organization serving chemists may abstract part of an article dealing with biochemical work on biology indicatively and part on chemistry informatively. Mission-oriented abstract is the one prepared for an abstracting service concerned with the application of a specific branch of knowledge (*e.g., Engineering abstracts*).

[5]Robert L. Collison, *op. cit.*, p. 26.

2 USEFULNESS

An abstract serves many useful purposes as given below:

(*i*) It helps in keeping one up-to-date with new knowledge.

(*ii*) It indicates, whether the article is of value to him or not. Thus he need not search unnecessarily and waste his time.

(*iii*) It serves as a rapid survey of retrospective literature.

(*iv*) It helps the user to overcome the language barrier to some extent because the abstract of an article in a language not known to him can be made available in a language he knows.

(*v*) It helps in improving indexing.

(*vi*) Classified abstracts bring together material on the same subject, which may otherwise be found scattered in a journal and elsewhere.

(*vii*) An informative abstract, sometimes can serve as a substitute to the original document.

(*viii*) It aids in the writing of reviews.

(*ix*) It enables one to make a retrospective search for literature in a field.

3 DEVELOPMENT OF ABSTRACTING SERVICES

The year 1665 should be considered as a milestone in the history of scientific communication because in this year was invented the scientific journal. On 5 January 1665, Denis de Sallo issued the first number of the first published abstract journal, called *Journal des scavans*. It continued for another 130 years. Again it was on 6 March 1665, when the first volume of *Philosophical Transactions* appeared in London. About the beginning of the nineteenth century, due to the unprecedented flow of material especially in science and technology, it became difficult for a scientist to digest the literature published in his field of specialization. Therefore, it was decided that an abstracting periodical could provide a solution. Thus an attempt to bring recorded information to the notice of researchers was made through *Pharmaceutisches centralblatt* (later named *Chemisches Zentralblatt*, and now renamed *Chemischer informationsdienst*) in 1830. Now almost every important field has an abstracting service of one or another type. In some areas, there is a lot of duplication and overlap amongst these services.

There is no slowing up in the introduction of new abstracting journals. New even more specialized journals continue to appear.

4 ITEMS INCLUDED

Main points, methodology, arguments, results and conclusions are usually given in a good abstract. An informative abstract is longer than an indicative abstract due to the difference in their objectives. The length usually varies between 50 and 150 words.

5 AN ABSTRACT *VERSUS* AN INDEX

The main difference lies in their form. In the first, an abstract is added.

An index locates material and an abstract locates material as well as describes the essential points dealt with in the document. An abstract indicates whether similar work has been done elsewhere or not, thereby avoiding unnecessary duplication. In the case of an informative abstract, it very often does away with the necessity of reading the original document. Both are time-saving for the researcher. However, an abstract leads to greater saving in time than an index.

6 ABSTRACTING PERIODICALS

Abstracts appear in different formats. The best known format for abstracting services is periodicals. An abstracting periodical "is a regularly issued compilation of concise summaries of (*i*) significant articles (often in a very limited subject field) that appear in current primary source journals, and (*ii*) of important new research monographs, reports, patents, and other primary source publications in that field."[6] Such a periodical is equipped with comprehensive indexes for easy location of articles. In this chapter, an attempt has been made to describe some of the important abstracting periodicals.

In each issue, the summaries are usually arranged by broad subjects and are provided with indexes under author, subject, etc.

The abstracting journals are selective in their coverage. Their frequency varies, and usually they are not cumulated, unlike indexes. However, cumulated indexes are prepared quite often to the main part which contains abstracts.

There is a certain amount of time-lag between their appearance and the appearance of primary sources of information on which

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'George S. Bonn, "Literature of science and technology," *McGraw-Hill encyclopedia of science and technology*, New York, McGraw-Hill, 1971, vol. 7, p. 614.

they are based. However, they are excellent for retrospective searches on a subject. Abstracts also serve as indexes to information on specific subjects and assist in surveying the current state of art of a given subject, thus enabling a user to keep himself up-to-date and well-informed in a specialized subject. They are also helpful in finding specific pieces of information and for acquiring background information.

7 EVALUATION OF AN ABSTRACTING PERIODICAL

The checklist for an evaluation of an abstracting periodical for the purpose of its study should consist of authority, scope, arrangement, indexes, items of information, special features and drawbacks, format and conclusion.

71 Authority

Which is the sponsoring body? Is it an authoritative one? Who are the abstractors? Are they scholars in their areas of specialization? Are they librarians who abstract with the assistance of specialists? Are they full-time professional abstractors?

72 Scope

(a) What are the limitations with regard to the subject (is it broad or specialized?), languages (are foreign periodicals covered?), place of origin of periodicals and length of period (is it abstracting current or retrospective issues of periodicals) for periodicals which are being abstracted?

(b) What is the number of periodicals abstracted?

What kind of periodicals are they (whether established or likely to be of permanent interest to the user, whether of a popular, technical or scholarly nature)? Are they fully representative of the field? Is the choice of the periodicals biased in any way?

(c) Does the abstracting journal include material other than articles in periodicals (e.g., pamphlets, documents, dissertations, patents, books, etc)?

Is it a current or retrospective indexing service?

73 Arrangement

Alphabetical:

(a) Dictionary-wise (author, title, subject entries and references arranged in a single sequence);

(b) Subject-wise;

(*c*) Author and subject-wise (single or two sequences).

Classified:

In case the arrangement is classified, it is essential to know whether there is a table of contents and an alphabetical index to the classified section.

74 Indexes

The main entry would contain bibliographic details and an abstract, there would also be indexes.

What kinds of indexes are given? Do they include author, subject, formula and patent indexes, etc? Are these adequate and well organized? Do they give an adequate number of cross references? Are the indexes convenient, easy and simple to use?

Do they give a list of periodicals abstracted?

75 Items of Information

Does the main entry provide full information such as, author's name, full title of the article, title of periodical (is the form intelligible?), volume, year, pagination, information about illustrations, bibliographies, etc., and an abstract? In case of materials other than articles in periodicals, the information is modified suitably. For instance, as earlier, in the case of a book, the minimum desirable information should consist of author's name, full title, place of publication, publisher's name, year of publication, information about illustrations, bibliographies, etc., and an abstract.

76 Special Features and Drawbacks

What is the frequency of the publication?

What kind of indexes are provided? How frequently are the indexes published? How often are they cumulated? Are larger cumulations of indexes available? Are the indexes comprehensive?

Is the publication brought out promptly? What is the time-lag between the publication of the item and the appearance of its abstracts? Is this time-lag reasonable?

Are all the articles in the periodicals covered, abstracted? If not, then what is the basis of selection? Is the coverage comprehensive, including articles appearing in all countries?

What kind of abstracts are provided? Are these accurate, clear, readable, complete (no significant information is omitted but it is also not unduly overloaded), signed, able to meet adequately the requirements of the clientele served by it? Does it provide titles of items abstracted in the original language or in transliteration? Does

it provide a complete list of abbreviations for the periodicals abstracted?

State whether it is a unique publication. Compare it with other services in the same field and determine the overlap and other features. Is there any special emphasis?

77 *Format*

Are the headings bold enough to stand out clearly?

Are the typefaces clear and legible enough?

Has a suitable difference been made between different types of headings or not by means of different varieties of typefaces?

78 *Conclusion*

Conclusion should include overall judgement about the work. Should it be recommended for a library or not? If so, then indicate the kind of library which will benefit most from it.

8 REPRESENTATIVE ABSTRACTING SERVICES

Some representative abstracting services in different fields, with special reference to India, are described below:

81 *General*

Bulletin signaletique, Paris, Centre Nationale de la Recherche Scientifique, 1940-, frequency varies (formerly appeared as *Bulletin analytique*).

This service is issued in 40 sections and includes abstracts of books, theses and articles from periodicals. It covers more than 5000 periodicals from many countries. The titles and abstracts are translated into French. The abstracts are brief and of the indicative type. They are of uneven quality. Author and subject indexes are provided for each issue, which are cumulated annually.

This service is difficult to consult due to the fact that too many changes have taken place in its organization and programme. It is however, a major international abstracting service, which provides good coverage of world literature. There is a considerable degree of overlapping between this and other abstracting services. However, certain areas are covered better by it, for example, the history of science. The additional advantage is that one can subscribe to sections, separately.

82 *Library and Information Science*

Indian library science abstract, Calcutta, Indian Association of

Special Libraries and Information Centres, 1967-, quarterly.

This abstracting journal reports work published in India. It abstracts original articles including short communication published in library science periodicals issued in India, and proceedings of conferences and symposia held in India. Indian language periodicals have been omitted.

In each issue, entries are arranged in classified order according to *Colon classification* followed by subject and author indexes. The latter are also cumulated annually.

This is a useful service for Indian library literature especially because the *Information science abstracts* and *Library and information science abstracts* do not cover Indian literature comprehensively.

Information science abstracts, Documentation Abstracts, 1966-, . bimonthly. Formerly called *Documentation abstracts*.

Cumulative index, 1966-75, is available in 16 mm microfilm.

This service is published by Documentation Abstracts under the sponsorship of the American Society for Information Science, Division of Chemical Information of the American Chemical Society and Special Libraries Association.

Each issue contains abstracts and an author index. The abstracts are arranged according to a classified pattern. A special feature is a continuity index. It indicates which abstracts were cross-referenced to any known abstract, regardless of when the known abstract was originally published.

Annual index is published in December from volume 9 (1974) on. The final issue contains two parts. Part *A* lists new abstracts and an author index to those abstracts and part *B* includes cumulated volume indexes (author, subject and continuity indexes) as well as a list of journals abstracted.

This is a comprehensive service which covers the newly developing field of information science.

Library and information science abstracts, London, Library Association, 1950-, bimonthly.

It supersedes *Library science abstracts*.

The subjects covered include library science, information science, and areas likely to be of interest to librarians and information scientists, like publishing, bookselling and reprography. It abstracts articles from 400 periodicals, conference papers, books and pamphlets. Only a few abstracts are prepared for the last two items.

Each issue has three sequences, namely, abstract sequence arranged according to a scheme entitled *A classification of library and information science*, author index and alphabetical subject index.

Several headings and subheadings along with class numbers are given. Author and subject indexes are cumulated on an annual basis. The subject headings and scheme of classification used are experiments, bound to be successful. The quality of indexing and abstracting is high.

This is the kind of service which no librarian or information scientist can afford to do without. However, there is some duplication between this service and *Information science abstracts*. The first emphasises traditional librarianship and the second pays more attention to the field of information science.

83 Science and Technology

Biological abstracts, Philadelphia, Biosciences Information Service of Biological Abstracts, 1926-, semimonthly.

Biological abstracts is a famous abstracting periodical which reports the world's bioscience researches covering more than 5,000 periodicals published all over the world.

The entries in the main part containing abstracts are arranged according to a scheme of classification worked out for the purpose. The outline of subjects classification appeared in *BA* volume 59(1), January 1, 1975, pp. 1-21. The main part is followed by author, biosystematic, genetic, cross and subject indexes. The biosystematic index contains lists of taxonomic categories which are coordinated with specific subject headings and abstract numbers for each issue. A genetic index lists, alphabetically, the taxa at the generic level (up to 20) mentioned in an abstract. The cross index coordinates or cross-relates all abstracts in *BA* which are specifically or generally relevant to a particular subject. The subject index is compiled from significant words found in the author's title and editorial insertion of relevant keywords. These words are positioned alphabetically by means of a computer so that additional subject words precede and follow the index word.

The main entries contain name(s) of author(s), address of principal author, full title, name of periodical, volume number, pages, illustrations, if any, year of periodical, year of receipt of article, information about language of the article, abstract in English and the initials of the abstractor.

The abstracts are non-critical, brief, informative digest of the significant content and conclusions of the paper, and not mere descriptions.

Indexes are cumulated on a semi-annual basis. The indexes cumued on a five-yearly basis as well as the first fifty volumes are

available on microfilm. The indexes are compiled with the help of a computer. Current issues of *BA* are also available on microfilm.

Each issue of *BA* contains a separate list of new books reviewed for reviews which are given under appropriate sections. These reviews are short, non-critical and descriptive.

The vastness of literature covered by *BA* can be gauged from the fact that in 1974 alone, it covered 140,024 abstracts.

BA helps in identifying effectively, literature in the biosciences and offers a large data base. *Biological abstracts* is a must for large libraries and libraries specializing in any one area of the biological sciences. However, libraries with limited resources cannot afford to subscribe to this abstracting service.

Chemical abstracts, 1907-, Easton, Pa., American Chemical Society, 1907-, vol. 1-, weekly.

In the present form, *Chemical abstracts* dates back to 1907 as a continuation of the *Review of American chemical research*. This *Review* was published as a section of the *Journal of the American Society* from 1897 to 1906.

CA contains English-language abstracts and indexes to the world's vast literature of chemistry and chemical engineering. The documents covered include journal articles, patent specifications, reviews, technical reports, monographs, conference proceedings, symposia, dissertations and books. *CA* aims to provide abstracts of all scientific and technical papers containing new information of chemical and chemical engineering interest and to report new chemical information appearing in the patent literature.

Each weekly issue contains two parts: (i) abstracts and (ii) issue indexes. The abstracts are classified according to chemical subject based on a hidden scheme of classification and are arranged in eighty subject groups or sections. The listing of the particular sections dealt with in each issue is found on the first page. The arrangement of abstracts within any section places journal articles and proceedings abstracts first, new-book announcements second, and patent abstracts, third.

Each issue contains a keyword index, a numerical patent index, patent concordance and an author index. A large number of cross-references are provided to serve alternative approaches. All indexes are produced by computer.

Each *CA* abstract begins with a combination of edited document title, full bibliographical citation plus other reference data. The name and location of the firm or institution at which the author is employed is also given. The abstracts are in English and signed.

. . . abstracts are informative, brief summaries of the major disclosures reported in the original documents. They provide for the reader, access to the original literature, but they do not replace that literature. They are expected to be accurate, clear, concise, and complete in essentials. They report the basic informational content of the original document. They are neither critical nor evaluative reviews. They are not meant to serve as laboratory manuals or chemical data handbooks. Their primary purpose is to give to the reader, accurate, quick and sufficient information on the chemical content of the document abstracted to allow him to determine whether he wants to consult the entire original publication. . . .

The first sentence of the abstract highlights the primary findings and conclusions reported in the original document. The text that follows the first sentence elaborates upon these highlighted findings and emphasizes the following significant data: (1) the purpose and scope of the reported work; (2) new reactions, compounds, materials, techniques, procedures, apparatus, properties, and theories; (3) new applications of established knowledge; and (4) the results of the investigation together with the author's interpretations and conclusions . . . *Chemical abstracts*, 2 January 1978, p. ix.

Out of 80 *CA* sections, 40 are available in computer readable, magnetic tape form as six individual topic-oriented, information services: *Chemical-biological activities*, *Ecology and environment*, *Energy*, *Food and agricultural chemistry*, *Materials*, and *Polymer science and technology*. *CA* Heading and keyword data can be obtained in computer-readable, magnetic tape as *CA Condensates*.

A list of periodicals abstracted by *CA* is published 'at an interval of five years. However the "periodical list: additions and corrections" is given on the last pages.

Between 1907 and 1937 one million abstracts were produced (years used here refer to the years of coverage). Between 1938-55, another million abstracts were produced, the third million appeared between 1956 and 1963; and the fourth million between 1964 and 1968. In 1964, 1974, 1977, the number of abstracts produced were 189, 993; 332, 624; 410137 respectively. This illustrates the rate of growth of this service.

There is no doubt that in the field of chemistry, *CA* is the most authoritative abstracting periodical. It covers a wider range of material than one might expect. Thus its usefulness is not confined to chemistry. It covers the whole area of chemical interest including chemical engineering. The abstracts are uncritical, highly accurate and informative. The indexes are detailed and scholarly. Indexes for

author, subject, formula, and numerical patent are cumulated. The value of collective indexes is enormous because they are time-saving and also because errors can be corrected. The information provided is reasonably up-to-date.

Chemical abstracts is the most comprehensive abstracting service in the world including abstracts from a worldwide list of periodicals. This service is used far more than any other abstracting service because research on chemistry and chemical technology has a bearing on research in a large number of fields. *CA* is an indispensable service for locating current articles on any topic in the fields concerned.

It is a must for a library serving research scholars in chemical sciences and chemical technology. The cost is so enormous that small or even medium-sized libraries cannot afford to purchase the complete set as well as the cumulative volumes. However, a library can purchase one or more sections of its interest, which may cost much less.

Indian science abstracts, Delhi, Indian National Scientific Documentation Centre, vol. 1-, 1965-, monthly.

This comprehensive service is aimed at serving as a feeder service to international service with regard to output of the country's scientific literature, and also to assist Indian science planners in assessing the progress of research in India.

It is a monthly abstracting periodical reporting work published by scientists in India, and also work done in India but published abroad.

It provides more than 14,000 abstracts annually. Over 600 Indian and 2,000 foreign scientific periodicals are scanned. It includes abstracts of original articles including short communication, reviews and informative articles published in scientific and technical periodicals, or in the proceedings of conferences and symposia, monographs and other ad hoc publications, patents, theses and standards. However, articles of a popular nature are excluded.

Entries in the main sequence are arranged classified-wise according to *UDC (Universal decimal classification)*. Author index and keyword index are given to provide an alphabetical approach. Cumulative author and subject indexes are provided on a yearly basis.

Each entry in the main sequence includes author (as well as the address of the first author), the title in English (titles in languages other than English are translated into English. In such a case, the language of the original article is indicated in square brackets after the title), bibliographical details (locus), abstract, and the initial

of the abstractor, unless the author abstract or summary or synopsis is used without any significant modification. In certain cases, no abstract is given, for instance if it is a short communication, letter to the editor or a review article. When the article contains ten or more references, then the total number of references is mentioned.

It indicates the nature of the articles according to the *Code of good practice for scientific publications* of UNESCO. Information about theses is provided, though that on patents is not very dependable and also appears very late.

Indian scientific literature is not covered adequately by international abstracting services. Therefore, this service is especially welcome from the point of Indian scientists. It certainly provides an effective bibliographic control of Indian scientific literature.

INIS atom index; an international abstracting service, Vienna, International Atomic Energy Agency, v. 1-, 1970-, semi-monthly.

INIS (International Nuclear Information System) provides the following services:

INIS magnetic tape service,

INIS atom index,

INIS non-conventional literature on microfiche.

INIS atom index, is a major international abstracting service in the field of atomic energy. Each issue consists of main entry section and a number of indexes such as personal author index, corporate entry index, subject index, conference index as well as report, standard and patent number index. Cumulated indexes are published twice a year

This is an indispensable tool to a researcher in the field of atomic research especially peaceful application of nuclear energy.

Physics abstracts: Science abstracts series A, London, Institution of Electrical Engineers, 1898-, fortnightly.

Physics abstracts is one of a series of abstracts publications produced by INSPEC (Information Service in Physics, Electrotechnology, Computers and Control). *PA* covers the whole field of physics, including journals, reports, books, dissertations, patents and conference papers in all countries and languages of the world.

The entries are arranged in accordance with a specially worked out subject classification scheme. The scheme is given at the beginning of each issue. A subject index to entries is also provided with each issue. Detailed, twice-yearly subject indexes to individual entries are provided separately. In each issue, an alphabetical index of authors is provided (which is cumulated every six months, separately). Besides, each issue contains subsidiary indexes such as biblio-

graphy index, book index, corporate author index and conference index. Detailed six-monthly cumulative indexes comprising author and subject indexes and some specialized or 'small' indexes are given.

All entries in *PA* follow the same basic pattern. For articles, title, author's name, author's affiliation, source of paper, abstract and number of references are given. Entries for other types of materials differ mainly in the reference to the source.

A list of journals scanned for the INSPEC services is published with the twice-yearly author indexes to *Physics abstracts*. Additions and amendments to this list are included towards the end of the first issue for each month.

"The number of items included per year is currently running at 85,000 per year." The journal is available on microfiche.

PA provides an authoritative source of world-wide published knowledge in the field of physics and related areas. It is a must for research scholars doing research in the field of physics.

Referativnyi zhurnal, Moscow, Institut Nauchnoi Informatsii Akademiya Nauk SSSR, 1953-, frequency varies.

It covers over 20,000 scientific and technical journals. This service comes out in the form of 61 series. The abstracts are in Russian but authors and titles are in the language of the original article. An author index is also provided for each issue. Duplication between various series is permitted to the extent necessary. It maintains high standard of accuracy in giving non-Russian references. The size of the service can be seen from the fact that about 1,000,000 abstracts are covered by it every year. This is the most comprehensive service in existence.

84 Social Sciences

Economic abstracts, The Hague, Martinus Nijhoff, 1953-, semi-monthly.

This is a semi monthly abstracting service, covering economics, finance, trade, industry, foreign aid, management, marketing and labour, compiled by the Library of the Economic Information Service (Ministry of Economic Affairs) of Netherlands.

This contains abstracts of highly selective items, especially articles in important periodicals with a more permanent value.

The main entries containing abstracts are arranged according to UDC (*Universal decimal classification*). Each main entry also contains descriptors in the English language. The alphabetical subject index is provided in the beginning of each issue. Author and subject

indexes are cumulated on an annual basis. A list of periodicals with annual indexes is provided, and short, quite excellent abstracts are given. It is a highly useful selective abstracting service in economics.

International political science abstracts, vol. 1 , 1951-, London, Blackwell, 1952-, quarterly (publisher varies).

This service is prepared by the International Political Science Association in cooperation with the International Committee for Social Sciences Documentation, and with the support of UNESCO. It abstracts articles from a large number of the world's leading political science journals published in various countries. The abstracts are in English or French. It is classified by large groupings and cumulative, annual author and subject indexes are available.

This is an excellent service in the field of political science.

Psychological abstracts, 1927-, Washington, American Psychological Association, 1927-, monthly.

Abstracts psychological literature published all over the world in all forms including books, chapters of books and articles, doctoral dissertations and occasional reports. In addition to psychological publications, it also covers material in related disciplines like sociology, phychiatry and physiology, of special interest to psychologists. Over 800 journals, technical reports, monographs and other scientific documents are covered.

Psychological abstracts follows classified subject arrangement along with alphabetical author and subject indexes. Monthly issues contain abstracts listed under seventeen major classification categories, with some categories having subsections.

Abstracts are non-evaluative in nature (annotations are provided for books) and are signed. (An author abstract is indicated as *journal abstract*).

Indexes are cumulated semiannually. Cumulated author and subject indexes have been published by G.K. Hall and Company.

PA since 1967, is also available on machine readable tapes, which forms the basis for an automatic search and retrieval service known as Psychological Abstracts Information Service (PAIS). *PA* is an indispensible abstracting journal in the field of psychology and is published with a reasonable time-lag between the appearance of the documents and the appearance of abstracts.

Sociological abstracts, (published under the co-sponsorship of the American Sociological Association, Eastern Sociological Society, International Sociological Association and the Midwest Sociological Society), New York, Sociological Abstracts, 1952, vol. 1-, 5 times a year.

This abstracting service provides comprehensive coverage of a broad range of world-wide sociological journals in all forms in various languages.

SA follows classified arrangement with author and subject indexes. A periodical index lists the particular issues of periodicals indexed in any particular issue of *SA*. The scheme of classification used is especially developed for the purpose. Indexes are cumulated annually. A cumulative index issue is published within nine months of the last issue (December). About 5000 items are abstracted annually.

A special feature of *SA* is the publication of supplementary issues giving abstracts of papers presented at association or congress meetings. The abstracts are more exhaustive in their coverage of American literature.

SA is an excellent service, providing a comprehensive coverage of sociological literature published in various forms in different languages all over the world.

85 *The Humanities*

There are very few major abstracting services in the humanities. The one given below is a good example of its kind.

Language teaching and linguistics: abstracts, London, Cambridge University Press, vol. 1-, 1968-, quarterly.

This is compiled by the English-Teaching Information Centre of the British Council and the Centre for Information on Language Teaching and Research.

This abstracting service aims to keep teachers and other professionally concerned, fully informed of the latest research and developments in the study and teaching of modern languages, including English as a second language. It provides summaries in English of selected article from nearly 400 periodicals from many countries, which cover relevant work in psychology, linguistics, language studies, teaching methodology and technology, and experimental teaching. Besides, annotations for new books and information about current research in Great Britain related to language teaching, are also included. At the beginning of each issue, there is a literature survey on a given topic. The arrangement of main entries is classified.

This is an excellent abstracting service, highly useful to teachers of languages and to linguists.

91 LISTS OF ABSTRACTING SERVICES

Since the number of abstracting services, especially in science and technology, is extremely large, one has to seek help from guides that list such services. These indicate what services are available in a particular subject. The following is a list of such guides:

Abstracting services, 2nd ed., the Hague, International Federation for Documentation, 1969, 2 volumes.

Guide to the world's abstracting and indexing services in science and technology, Washington, National Federation of Science Abstracting and Indexing Services, 1963 (lists 1855 services).

Ulrich's international periodicals directory, 17th ed., 1977-78, New York, Bowker, 1977.

A list of indexing and abstracting services has been listed at the beginning.

Guide to reference materials, ed., A.J. Walford, 3rd ed., London, Library Association, 1973-77, 3 volumes.

Guide to reference books, by C.M. Winchell, 8th ed., Chicago, American Library Association, 1967. First supplement, 1965-67, second supplement, 1967-68, third supplement, 1969-70.

9th edition of the above work has been compiled by E.P. Sheehy (New York, American Library Association, 1976).

92 CONCLUSION

Abstracts form organized sources of literature. These are of immense value to researchers for current as well as retrospective searches. Most fields are by now covered by one or another form of abstracting service. The number of documents abstracted in some of the major abstracting services during recent years has increased tremendously, due to the great strides taken forward by knowledge.

Abstracting periodicals in many of the areas are too numerous and too costly, with great duplication and overlap in coverage. However, certain fields have not been covered adequately at all. The recent application of computers has improved some services somewhat, and the time-lag between the publication of document and its inclusion in the service has been reduced in many cases. Cumulation of indexes to these has improved with the use of computers.

FURTHER READING

"Abstracting services," *Library Trends*, January, 1968.

W.E. BATTEN, *ed.*, *Handbook of special librarianship and information work*, 4th ed., London, Aslib, 1975, Ch. 5.

CHARLES L. BERNIER, "Abstracts and abstracting," *Encyclopedia of library and information science*, New York, Dekker, 1968, Vol. 1, pp. 16-38.

HAROLD BORKO AND SEYMOUR CHATMAN, "Criteria for acceptable abstract . . ." *American Documentation*, 14, 1963, pp. 149-60.

CAS today, Philadelphia, Chemical Abstracts Service, 1974.

ROBERT L. COLLISON, *Abstracts and abstracting services*, Santa Barbara, California, American Bibliographical Center, Clio Press, 1971.

N.N. GIDWANI, "Periodical literature," *Encyclopedia of library and information science*, New York, Dekker, 1974, Vol. 11, pp. 419-22.

DENIS GROGAN, *Science and technology; an introduction to the literature*, 3rd ed., London, Bingley, 1976, Ch. 10.

B. GUHA, "Indian current awareness services," *UNESCO Bulletin for Libraries*, 22, 1968, pp. 73-81.

International Conference on Science Abstracting, *Final report*, Paris, UNESCO, 1949.

WILLIAM A. KATZ, *Introduction to reference work*, 3rd ed., Vol. 1, New York, McGraw-Hill, 1978, pp. 125-129.

ROBERT E. MAIZELL, *et. ol.*, *Abstracting scientific and technical literature*, New York, Wiley-Interscience, 1971, pp. 210-211.

P. V. PARKIN, "Biosciences information service of biological abstracts," *Encyclopedia of library and Information science*, New York, Dekker, 1969, Vol. 2, pp. 603-21.

S.R. RANGANATHAN, *Classified catalogue code with additional rules for dictionary catalogue code*, 5th ed., Bombay, Asia Publishing House, 1964, Part U.

L. SCHULTZ, "New developments in biological abstracting and indexing," *Library Trends*, 16, 1968; pp. 337-52.

H. A. WATLEY, "On using library information science abstracts," *Library Association Record*, 73, 1971, p. 45.

- ·, *Survey of major indexing and abstracting services for library science and documentation*, Library Association, 1966.

C. M. WINCHELL, Guide to reference books, 8th ed. Chicago, Library Association, 1967, pp. 525-26.

24 BIBLIOGRAPHIES: SELECTIVE, PERSONAL, BIBLIOPHILIC, DISSERTATION, UNION CATALOGUES, LISTS OF PERIODICALS, UNIVERSAL, BIBLIOGRAPHY OF BIBLIOGRAPHIES

1 SELECTIVE BIBLIOGRAPHIES

THE selective bibliographies list selected items which are arranged systematically, usually according to the subject. They are of great value for the purpose of selecting retrospective material especially for small and medium-sized libraries. Some of these serve as guides to best or standard works. We may recognize the following categories of such bibliographies:

Special reading lists (these are usually compiled by libraries to serve special requirements of clientele);

Books devoted to best works for various categories of users; and Guides to reference books.

Examples of lists of best books:

Best books, by W. S. Sonnenschein, 3rd ed., London. Routledge, 1910-35, 6 vols.

Booklist, Chicago, American Library Association, vol. 1-, 1905-, twice monthly except once in August.

The reader's advisor : a layman's guide to literature, 12th ed., New York, Bowker, 1974-77.

World's best books, by Asa Don Dickinson, New York, Wilson, 1953.

Standard catalogue series issued by H.W. Wilson.

Examples of guides to reference books:

Guide to reference books, compiled by Eugene P. Sheehy, 9th ed., Chicago, American Library Association, 1976.

Guide to reference materials, edited by A. J. Walford 3rd ed., London, the Library Association, 1973-77, 3 volumes.

Indiaana: a select list of reference and representative books on all aspects of Indian life and culture, by B. Sengupta, Calcutta, World Press, 1966.

2 PERSONAL BIBLIOGRAPHIES

Personal bibliography is "a list of the writings by and on a person."[1]

In the field of literature, personal bibliographies are extremely important. They serve a very useful purpose for scholars in the field concerned.

Examples:

An essay in personal bibliography: bibliography of the writings on and by S. R. Ranganathan, by A.K. Das Gupta, Bombay, Asia Publishing House, 1967.

Dickens student and collector: a list of writings relating to Charles Dickens and his works, 1836-1945, by W. Miller, Cambridge, Harvard University Press, 1946.

This is a comprehensive bibliography listing writings on Dickens and his works.

21 Author Bibliographies

An author bibliography is a complete list of all the documents by an author. This would cover his books, articles in periodicals, contributions to books, documents edited by him, etc., in all their various editions, translations and adaptations. Thus, "a personal bibliography of a purely 'by' kind is an author bibliography."[2]

Sometimes an author bibliography is called a bio-bibliography. Ranganathan also calls author bibliography by the name, producers (thought) bibliography.

Most author bibliographies provide brief details but a descriptive bibliography enables one to identify the most complete as well as accurate text.

Examples:

Chaucer: a bibliographical manual, by E. P. Hammond, New York, MacMillan, 1908.

This is a good example of an author bibliography. It describes sources, manuscripts, editions, translations, versions, etc., of the works of Chaucer. *Bibliography of Chaucer* by D.D. Griffith serves as a supplement to it.

Collected works of Mahatma Gandhi, Delhi, Publications Division, Ministry of Information and Broadcasting, 1958-, volume 1- (the set

[1] S. R. Ranganathan, *Physical bibliography for librarians,* 2nd ed., Bombay, Asia Publishing House, 1974, p. 23.

[2] *Ibid.,* p. 24.

has not been completed as yet, though over seventy volumes have been published so far. Sixty-seven volumes have appeared in Hindi edition.

This collection includes original works consisting of letters, interviews, and other writings. Documents have been arranged chronologically and fully annotated. The contents pages constitute an author bibliography.

22 Subject Bibliographies

A list of writings on a person is a kind of personal bibliography called subject bibliography because in such a case, the person as an entity becomes the subject of study. Thus "a personal bibliography of a purely 'on' kind is a subject bibliography."[2]

Example:

Bibliography of Chaucer, 1908-53, by D.D. Griffith, Seattle, University of Washington Press, 1955.

This work brings together all the significant scholarship of Chaucerian studies published during the period, 1908-53. The purpose of this work is to provide a supplement to Hammond's *Chaucer; a bibliographical manual*.

3 BIBLIOPHILIC BIBLIOGRAPHIES

A bibliophile is a person who loves or collects books. He gets a special pleasure out of book collecting. Quite often he collects books from the point of view of peculiarities in the physique of books. Thus a bibliophile may be interested in artistically distinguished binding, kinds of typefaces, illustrations, etc. Collecting first editions is a fad with many book collectors.

Examples:

American first editions, by Merle De Vore Johnson, 4th ed., revised and enlarged by Jacob Blanck, New York, Bowker, 1942.

This lists the first editions of more than 200 American authors of collector interest.

Book collector's guide; a practical handbook of British and American bibliography, by S. de Ricci, Philadelphia, Rosenbach, 1921.

This guide covers the period from Chaucer to Swinburne, listing books by rarity, market value, etc., that were most sought after by collectors.

[2]*Ibid.*, p. 24.

4 DISSERTATION BIBLIOGRAPHIES

Dissertations are extremely important to research scholars, and therefore, their bibliographic control is of utmost importance. Many countries bring out bibliographies of dissertations limited to their countries. Very often, individual universities also publish lists of dissertations awarded a doctorate. Some indexing and abstracting services also include dissertations, for examples, *Chemical abstracts*, *Indian science abstracts* and *Physics abstracts*. However, *Dissertation abstracts international* should be regarded as a remarkable tool, which no research scholar working in any field can afford to ignore. The same is described below:

Dissertation abstracts international, vol. 1-, 1938-, Ann Arbor, Michigan, Xerox University Microfilms, monthly.

Its title was previously, *Dissertation abstracts* but from 1970 on, the present title has been adopted.

It lists abstracts of doctoral dissertations submitted to Xerox University Microfilms by more than 400 cooperating institutions. Basically, it is a guide to American and Canadian doctoral dissertations but it has begun including theses from a few European universities as well. An attempt is being made to widen the European coverage.

Originally, it was a single list but since July 1966, it comprises two sections:

A. *Humanities and social sciences*

B. *Sciences and engineering*

Both sections are published separately on a monthly basis.

The entries in the main sequence in each section are arranged first, alphabetically, according to broad subjects and within each broad subject or its subdivision, these are further arranged alphabetically by author. The details of theses given in these entries include full title, a summary of 400 to 600 words and name of author as well as his supervisor. The keyword title and author index are given separately for each section at the end of each section concerned.

From volume 34 on, only author indexes are cumulated annually for section *A* and section *B* in one sequence.

The keyword index can be searched by a computer under a system called DATRIX II (a computerized searching system) which includes data for these theses going back as far as 1938.

A retrospective index in 9 volumes covering volumes 1-29 of *Dissertation abstracts international*, was published in 1970, arranged subject areas, with author index (vol. 9). Keywords in dissertation

titles (which are used as descriptors) are listed in it. This is an extremely useful publication for retrospective searches.

It is an excellent abstracting service of its own kind. It is extremely important to a research scholar working in any field, to the extent that he cannot afford to ignore it.

5 UNION CATALOGUES

A union catalogue is an important tool for a librarian. It is "a catalogue listing in one sequence the holdings or part of the holdings of two or more libraries."[4] We may recognize local, regional and national union catalogues. Further division may be done on the basis of the kinds of material included, e.g., books, periodicals, films, etc.

51 Functions

A union catalogue can serve the following functions: (*i*) to serve as a tool for the location of a document; (*ii*) to identify a given document for which bibliographic information is provided (in case of a periodicals union catalogue, information like name of periodical, change in name, when it was started, whether continuing or not, etc., may have to be included); (*iii*) to help in inter-library loan (when a user requires a document not available in a given library, a union catalogue is consulted to locate the nearest library likely to have that document); (*iv*) to serve as a tool for selection of documents; (*v*) to help to achieve coordination in the acquisition and selection programme of a group of libraries (it can help avoid unnecessary duplication of materials like periodicals, etc.); and (*vi*) to reveal the total document resources of libraries in a given geographical region, thereby indicating the strengths and weaknesses of the holdings in that area.

52 India

A short description of selected union catalogues compiled in India is given below:

Union catalogue of learned periodical publications in South Asia, compiled by S.R. Ranganathan, etc., vol. 1: *Physical and biological sciences*, Delhi, Indian Library Association, 1953.

This catalogue lists about 6,000 entries based on returns received from 424 participating libraries. The region covered comprises India,

[4]Knud Larsen, *National bibliographical services*, Paris, UNESCO, 1953, p, 56.

· Thailand, Indonesia, Malaya, Ceylon and Burma. It includes only those periodical publications which are of value to researchers.

The main entries are arranged according to classified order based on *Colon classification*[5] (3rd edition). Indexes have been provided for an alphabetical approach through subject, title and sponsoring body.

Each main entry contains full bibliographic information about periodical publications including title, sponsoring body, volumes or series, years, cumulative indexes (if any), complete history and holdings of the participating libraries.

Although it is dated, it is considered a useful and pioneering attempt.

Union list of learned American serials in Indian libraries, Delhi, Indian Council for Library Development, 1966.

This is a union catalogue which lists only American serials available in Indian libraries. There are 2584 entries from 161 libraries. It is certainly a useful work and the Indian Council for Library Development has done a good job.

INSDOC has brought out a series of regional union catalogues of scientific serials, covering different regions. These follow a set pattern. They are limited to scientific serials available in a given region. These are listed below:

Regional union catalogue of scientific serials : *Bangalore*, Delhi, INSDOC, 1967.

——; *Bombay-Poona*, New Delhi, INSDOC, 1973.

——; *Dehradun-Roorkee*, New Delhi, INSDOC, 1971.

——; *Delhi Medical Libraries*, New Delhi, INSDOC, 1967.

——; *Hyderabad*, New Delhi, INSDOC, 1975.

——; *Kerala*, New Delhi, INSDOC, 1969.

——; *Lucknow*, New Delhi, INSDOC, 1976.

——; *Madras*, New Delhi, INSDOC, 1975.

——; *Mysore*, New Delhi, INSDOC, 1968.

——; *Varanasi*, New Delhi, INSDOC, 1968.

——; *West Bengal*, New Delhi, INSDOC, 1978.

The table on the next page indicates their scope.

The term serial is used in a wide sense to include publications of indefinite duration appearing in a sequence either regularly or irregularly but having a common title. Therefore, a serial in this sense would include journals, bulletins, reports, proceedings, transactions

[5]S. R. Ranganathan, *Colon classification*, 3rd ed., Madras, Madras Library Association, 1950.

of learned bodies, government departments, etc. Some house journals and popular periodicals are also covered. Subjects covered fall under the main classes, 5 and 6 of the UDC. However, certain borderline subjects are also included, for example, documentation, library science, information theory, muscology, psychology, etc.

Region covered	Number of libraries	Number of titles included
Bangalore	49	3249
Bombay-Poona	66	8082
Dehradun-Roorkee	15	3057
Delhi and New Delhi	14 (medical libraries)	3080
Hyderabad	51	3840
Kerala	25	2122
Lucknow	21	3074
Madras city	57	6017
Mysore state	43	2623
Varanasi	16	2643
West Bengal	149	18349

Union catalogues consist of two parts, namely main part and indexes. The entries in the main part are arranged alphabetically by title. The titles are rendered on the basis of *World list of scientific periodicals, 1900-60*. Complete bibliographic information is given in these. Holdings section and history of the periodical is added to each of these. The second part consists of three indexes, namely, classified (based on UDC), language (it has been provided in some catalogues and sponsor. These are provided at the end. For full information one is directed from indexes to the main part, where titles are arranged alphabetically. In the classified part, titles are arranged according to UDC. Within each subject, further arrangement is done alphabetically by title. A key to the classified index is also provided. Wherever necessary, cross-references have been added.

Regional union catalogues for Hyderabad and Lucknow were both computer print out.

These catalogues are a valuable aid to research. No research library in science in India can do without them.

Regional union catalogue of scientific serials; Madras, Delhi, INSDOC, 1975.

The term serial has been used in a wider sense to "denote publications of indefinite duration appearing in sequence (either regularly or irregularly) under a common title." This union catalogue

contains about 6,600 entries including cross-references, listing 6017 titles from 57 libraries located in the city of Madras.

The main part contains an alphabetical list of serials, giving bibliographic details and holdings in each entry. There are two indexes, namely, classified (by UDC) and sponsor.

This union catalogue has been printed from a computer printout. It is a valuable work, highly useful for purposes of location and identification of scientific serials.

Note: A series of such union catalogues is being compiled by INSDOC. The above represents just a sample.

Besides the regional union catalogues, INSDOC has also brought out (*a*) Union catalogue of serials in the Geological Survey of India Libraries,. (*b*) Regional union catalogue of scientific serials; Delhi medical libraries:

Union catalogue of serials in the Geological Survey of India libraries, New Delhi, INSDOC, 1969.

This is a union catalogue of the holdings of scientific serials available in the 16 libraries of the Geological Survey of India located at different places in the country. It includes 12,000 titles.

The entries are arranged alphabetically by title. Three indexes, namely, classified (based on UDC), language and sponsor are provided at the end.

ICSSR has brought out a series of union lists of social science periodicals, covering different regions. These merely list the periodicals and names of libraries, where they are available, without giving the holdings of the libraries. These have been listed below:

Union list of social science periodicals; *Andhra Pradesh*, New Delhi, ICSSR, 1972.

——; *Bombay*, New Delhi, ICSSR, 1972.

——; *Delhi*, New Delhi, ICSSR, 1971.

——; *Karnataka*, New Delhi, ICSSR, 1972.

Region covered	Number of libraries	Number of periodicals
Andhra Pradesh	37	1226
Bombay	67	1775
Delhi	107	4074
Karnataka (Mysore)	18	1093

The above union lists follow a uniform pattern. Each is limited to social science periodicals available in a given region. The above table indicates their scope.

The table shows that Delhi region has the richest collection of periodicals in the social sciences.

The main entries are arranged in alphabetical order and contain complete bibliographic details as well as indications about libraries where the periodical is available.

The scope of social sciences as defined by ICSSR for bibliographic work is as follows:

Anthropology, commerce, demography, economics, education, geography, history, journalism, law, library science (documentation, automation and reprography), linguistics, management studies, political science (including international affairs and public administration), psychology, sociology, statistics, and town and country planning.

A large number of general periodicals which are significant for research in the social sciences are also included. Dailies are excluded except *Economic Times* and *Financial Express*, both providing useful information in the industrial and financial fields.

Description of one union list as a sample is given below:

Union list of social science periodicals currently received in Delhi libraries, New Delhi, Social Science Documentation Centre, ICSSR, 1971.

This list covers 107 libraries in Delhi including all the major libraries. It lists 4074 periodical titles known to be received on a current basis in these libraries during 1970. Daily newspapers have been excluded except *Gazeta*, the *Economic Times*, the *Financial Express* and the *Ekonomichieskaia* which are devoted exclusively to social science subjects. Literary, cultural and popular periodicals have been excluded. Irregular and annual periodicals and gazettes of Indian states have also been excluded.

The subjects covered are anthropology, commerce, demography, economics, education, general, geography, history, journalism, law, management studies, political science, psychology, sociology, social work, statistics, and town and country planning. The periodicals listed are published from 96 different countries.

The study of the *Union list* shows that libraries in Delhi are rich in their periodical holdings in social sciences.

ICSSR has brought out a series of union catalogues of social science periodicals covering different regions. The term periodicals refers to bulletins, journals, magazines, newspapers, etc. There is a difference between the terms, union list and union catalogue as used by the ICSSR. In a union list, only lists of periodicals available in the libraries covered are given while in a union catalogue,

the complete holdings of libraries for those periodicals are also provided. The union catalogues follow a uniform pattern. Each being limited to social science periodicals available in a given region.

The list of union catalogues is given below:

Union catalogue of social science periodicals: Andhra Pradesh, New Delhi, ICSSR, 1974.

——; *Assam*, New Delhi. ICSSR, 1976.

——; *Bihar*, New Delhi, ICSSR, 1976.

——; *Delhi*, New Delhi, ICSSR, 1973.

——; *Gujarat*, New Delhi, ICSSR, 1976.

——; *Jammu and Kashmir*, New Delhi, ICSSR, 1976.

——; *Karnataka*, New Delhi, ICSSR, 1973.

——; *Kerala*, New Delhi, ICSSR, 1974.

——; *Madhya Pradesh*, New Delhi, ICSSR, 1975.

——; *Maharashtra*, New Delhi, ICSSR, 1975.

——; *National Library* (Calcutta), New Delhi, ICSSR, 1976.

——; *Orissa*, New Delhi, ICSSR, 1975.

——; *Punjab, Haryana and Himachal Pradesh*, New Delhi, ICSSR, 1974.

——; *Rajasthan*, New Delhi, ICSSR, 1976.

——; *Tamil Nadu*, New Delhi, ICSSR, 1975.

——; *Uttar Pradesh*, New Delhi, ICSSR, 1975.

——; *West Bengal*, New Delhi, ICSSR, 1975.

The table given on next page shows that Delhi region has the richest collection of periodicals in the social sciences.

The main entries are arranged in alphabetical order. These consist of title, language (if it is published separately in more than one language), place of publication, first year of publication, history of the periodical, and holdings.

ICSSR intends to bring out supplementary volumes to keep these catalogues up-to-date.

The following union catalogue compiled by ICSSR has been described in some detail for illustrative purposes:

Union catalogue of social science periodicals; Delhi, Social Science Documentation Centre, ICSSR, 1973.

This union catalogue records the availability of the complete or incomplete volumes of 7119 social science periodicals in 68 libraries in Delhi in 1971-72. Annuals are generally excluded. Several categories of periodical publications which are generally regarded to be serial, such as report and review-type publications from government and other corporate bodies are also excluded.

The main entries are arranged alphabetically by title. In each

main entry, the complete bibliographic details as well as holdings sections are given. However, there are no indexes, which is certainly a drawback. Cross-references occur in the main part itself.

Region covered	Number of libraries	Number of periodicals
Andhra Pradesh	36	1727
Assam	5	358
Bihar	35	684
Delhi	68	7119
Gujarat	24	1671
Jammu and Kashmir	10	323
Karnataka	18	1056
Kerala	16	1147
Madhya Pradesh	19	858
Maharashtra	54	3645
National Library (Calcutta)	1	6000
Orissa	15	503
Punjab, Haryana and Himachal Pradesh	19	1399
Rajasthan	18	1900
Tamil Nadu	88	2873
Uttar Pradesh	44	2288
West Bengal	29	2614

The work lists the holdings of libraries in the Delhi region which has the richest collection of periodicals in social sciences in the country. This indicates the value of such a union catalogue.

ICSSR has also brought out union catalogues of social science serials covering the various regions. The term serials includes annuals (reports, yearbooks, handbooks, advances, etc.) and memoirs, proceedings and transactions of institutions, societies, conferences, congresses and legislative bodies. In this context a large number of publications of union, state and local governments and those emanating from the United Nations and other international organisations are treated as serials. Similarly, national bibliographies, indexes, university calendars etc., which may be issued regularly or irregularly are also treated as serials.

These follow a uniform pattern. Each is limited to social science serials available in a given region. The list is given below:

Union catalogue of social science serials; *Andhra Pradesh*, New Delhi, ICSSR, 1976.

— —: *Assam*, New Delhi, ICSSR, 1976.

— —;*Bihar*, New Delhi, ICSSR, 1976.

——; *Delhi*, New Delhi, ICSSR, 1975, 3 parts,

——; *Gujarat*, New Delhi, ICSSR, 1976.

——: *Karnataka*, New Delhi, ICSSR, 1976.

——; *Kerala*, New Delhi, ICSSR, 1976.

——; *Madhya Pradesh*, New Delhi, ICSSR, 1975.

——; *Maharashtra*, New Delhi, ICSSR, 1976.

——; *National Library*, New Delhi, ICSSR, 1976.

——: *Punjab, Haryana and Himachal Pradesh*, New Delhi, ICSSR, 1976.

——: *Rajasthan*, New Delhi, ICSSR, 1976.

——; *Tamil Nadu*, New Delhi, ICSSR, 1976.

Region covered	Number of libraries	Number of serials
Andhra Pradesh	27	3310
Bihar	34	1257
Delhi	65	2489+5512+6055 (3 parts)
Gujarat	16	2352
Karnataka	20	1720
Kerala	14	1836
Madhya Pradesh	18	1346
Maharashtra	23	6754
National Library	1	4328 serials 2064 periodicals
Punjab, Haryana and Himachal Pradesh	21	1575
Rajasthan	12	1332
Tamil Nadu	64	1932
Uttar Pradesh	41	1890
West Bengal	29	2993

——; *Uttar Pradesh*, New Delhi, ICSSR, 1976.

——; *West Bengal*, New Delhi,, ICSSR, 1976.

The union catalogues mentioned have proved extremely useful. It is hoped that these will be kept up-to-date.

53 United States of America
National Union Catalog: a cumulative author list.

The author catalogues of the Library of Congress—National union Catalog series vary in title, form and coverage. These are complemented by the subject catalogue of the Library of Congress. For a detailed description consult Chapter 20.

Union list of serials in libraries of the United States and Canada, 3rd ed., New York, H.W. Wilson, 1965, 5 volumes.

This is a union list which includes serial titles before 1950. Government publications (except periodicals and monographic

series), newspapers and law reports are excluded. It includes the holdings of 956 libraries, 32 of which are in Canada.

There are entries for 156,449 serials arranged alphabetically, under the title. Cross-references have been given to cover changes in title. Elaborate bibliographic details are not given. Unfortunately, it does not provide a subject approach. It is the basic finding list on the holdings of American and Canadian libraries, international in its coverage of serials and is a boon to scholars.

New serial titles, 1950-70, New York, R.R. Bowker, 1972, 5 volumes.

It is a continuation of the *Union list of serials in libraries of the United States and Canada,* presenting a twenty-year cumulation of serials. It covers the period 1950 to 1970, listing about 260,000 serials of all kinds that commenced publication after 31 December 1949. The entries are arranged alphabetically by title, giving ISSN and country code, Dewey decimal classification number, issuing body, place of publication, date of first publication and date of last issue if it has ceased publication, and location symbols.

New serial titles, Washington, D.C., Library of Congress, 1961-, 8 issues per year, cumulated quarterly and annually.

This is a highly useful publication, updated almost on a monthly basis (8 issues per year), which helps in locating almost any periodical, giving minimum required information including changes in the periodical.

54 United Kingdom

British union catalogue of periodicals; a record of the periodicals of the world, from the seventeenth century to the present day, in British libraries, edited for the Council of the British union-catalogue of periodicals by J.D. Stewart, with M. E. Hammond and Erwin Saenger, New York, Academic Press; London, Butterworths, 1955-58, 4 volumes; supplement to 1960, Hamden, Conn., Archon Books, Shoe String Press, 1962.

Lists more than 140,000 periodical titles contained in 441 libraries in the United Kingdom. It also includes newspapers published before 1799.

Periodicals are listed under the first word of the title, not an article, except those issued by an organization. These are entered under the name of the organization unless the title is specific.

All periodicals are entered under their earliest known names, followed by information about all changes of name, in chronological sequence. References are given from later names to the

original name. All academics, societies and other organizations are entered under their original names, with particulars of alternative names, and all changes of organization. References from all variants refer to the original name.

It supplements as well as complements *Union list of serials in libraries of the United States and Canada*. The *Union catalogue* includes many titles not included in the *Union list* and vice versa.

British union catalogue of periodicals, London, Butterworths Scientific Publications, 1964-, quarterly and annual cumulations.

It supplements the basic set mentioned earlier. It includes periodicals after 1960. It is a useful periodical publication, updated on a quarterly basis. However it has not totally succeeded in covering periodicals started after 1960. *World list of scientific periodicals* (London, Butterworths, 1963-65, 4th ed., 3 vols) is continued in it.

55 Conclusion

Union catalogues are extremely useful for the location and identification of documents, and are therefore regarded as important tools. The number of union catalogues is increasing at a fast pace. These have improved in their frequency, promptness, coverage, amount of details, etc. This is mainly due to the fact that many of them are now being compiled, cumulated, and printed with the help of computers. Even developing countries are beginning to develop computer-based union catalogues. This is proving to be neither too expensive nor too difficult. The regional union catalogues prepared by INSDOC are one such example.

6 LISTS OF PERIODICALS

It is considered that non-monographic literature such as periodicals present the greatest problem in the achievement of complete bibliographic control because we find that they are most difficult to deal with.

Journals are the major means for the reporting of research and are considered the very basis of the scholarly communication system. The history of journals goes back to the seventeenth century, about the time when organized scientific activity began. Originally, they were meant for announcing current books, but today journals cover total current scientific activity with emphasis on reporting research in considerable detail.

The number of scientific journals was about 100 at the beginning of the nineteenth century. In 1850, it became 1,000. By 1900, it had

crossed 10,000, approaching 100,000 in 1960. At this rate, it is
estimated that the number is likely to approach one million by the
end of the twentieth century. This goes to show the nature of the
problem inherent in bibliographic control of periodical literature.
Listing of periodicals is one such attempt towards bibliographic
control of these literatures.

61 India

Directory of Indian scientific periodicals, 3rd. ed., New Delhi,
INSDOC, 1976.

This edition has been brought out from a computer print out.
It covers 1593 periodicals in science and technology and allied sub-
jects in English as well as in Indian languages. It covers journals,
conference and symposia proceedings and reports, transactions,
bulletins, etc. Current awareness lists are included on selective
basis. It includes 207 annual reports, 63 documentation lists and
abstracting periodicals, 260 Indian language periodicals, etc. How-
ever, house journals and ephemeral publications have been excluded.
The information provided is up to the end of 1975. Guidelines for
ISDS laid down by UNISIST/UNESCO have been followed. This
is certainly a useful work.

Indian periodicals; an annotated guide, compiled by N.N. Gidwani
and K. Navlani, Jaipur, N.N. Gidwani, 1969.

It is a classified guide to Indian periodicals published in English,
covering 5121 entries. Publications of an ephemeral nature (espe-
cially regarding contents) or those too cheaply priced and too in-
differently produced or meant for children and so on are excluded.
It is a useful work and fills a long-felt gap.

Indian periodicals in print, 1973, H.N.D. Gandhi, Jagdish Lal
and Suren Agrawal, Delhi, Vidya Mandal, 1973, 2 volumes.

Volume 1 is a list of 16,483 current periodicals on all subjects
and languages published in India. Volume 2 is a user's guide, arran-
ged by subject, further subdivided by place of publication and in
some cases, by language. It is a useful work but leaves much to be
desired.

Nifor guide to Indian periodicals, Poona, National Information
Services, 1955.

This is the first directory of its kind listing 2127 Indian periodi-
cals and newspapers. Besides, it includes a separate alphabetical list
of 1526 additional unclassified titles about which sufficient infor-
mation for classification was unavailable.

The main part contains four sequences (language, subjects, perio-

dicity and geographical) followed by 12 statistical tables with several indexes.

The language section (covering 23 languages and dialects) gives full information about each periodical including title, date of commencement, size, frequency, cost, editors and publisher, with reference to subject classification.

The *Nifor guide* was a useful work at one time but is now outdated. It is still useful in a number of ways. For up-to-date information, however, one must turn to *Indian periodicals*, edited by N.N. Gidwani and N. Navlani or *Indian periodicals in print* or *Ulrich's international periodicals directory*.

Press in India: Annual report on the press compiled by the Registrar of newspapers for India under the PRB Act, New Delhi, Ministry of Information and Broadcasting, Government of India, 1964-.

This is an annual report of the Registrar of Newspapers for India. Part II contains a list of newspapers and periodicals published in the country. It is considered a useful tool.

A quinquennial cumulative volume list of serials is brought out as a part of *Accessions list: India*. Each issue of *Accessions list* contains separate list of new serial titles, additions, changes and deletions. These are cumulated annually.

62 United States of America

N. W. Ayer & Son's directory of newspapers and periodicals, Philadelphia, N.W. Ayer, 1880-, annual.

This is a comprehensive annual directory which includes over 22,000 newspapers and magazines, primarily limited to the United States and Canada.

The arrangement is geographical (first by state and then by city), indicating what newspapers and magazines are published in any city. There is an excellent general alphabetical index at the end which lists all publications, except daily and weekly newspapers, and helps in finding information about a specific magazine or newspaper whose place of publication is not known. Publications including newspapers and periodicals are listed under city of origin with information for name, frequency of issue, price, circulation, names of editors, political affiliation, etc.

Preceding the section on each state, and for some cities, extensive gazetteer-type information regarding population, distance between towns, industries, etc., is given. A classified list at the back of the book divides the works into groups: negro publications, religious

publications, trade and technical publications, etc.

It is primarily, a directory and secondarily, a handy reference tool on many states, cities and provinces.

Ulrich's international periodicals directory; a classified guide to current periodicals, foreign and domestic, 17th ed., 1977-78, New York, Bowker, 1977.

This is a comprehensive list of periodicals, world-wide in scope. It covers about 60,000 periodicals spanning over 160 countries.

Ulrich's includes "periodicals which are currently in print, issued more frequently than once a year, and usually published at regular intervals over an indefinite period of time."

The work consists of the following main sections:

Classified list of periodicals, cessations section (includes periodicals, which have ceased publication, since the last edition of *Ulrich's*, helping in avoiding fruitless search for ceased periodicals), index to publications of international organizations, and title index.

Classified list consists of complete entries arranged alphabetically under 250 main subject headings and subheadings. If a periodical deals with more than one subject, then cross references are used to direct the readers to the subject under which the full citation will be found. The complete entry contains (depending upon the availability of information) Dewey decimal classification number, country code and ISSN (International Standard Serial Number), name of publication, translated title, subtitle, language(s) of text, year first published, frequency, annual subscription, sponsoring body, publisher's name and address, editor, advertising, reviews, abstracting section, bibliography section, charts, illustrations, indexed in—, abstracted in—, former title, key word annotation, etc. Rules of entry are based mainly on traditional practices as well as trends towards key word title.

A cross-index to subjects, giving key words not used in the subject headings is provided in the beginning. If the periodical is not available through subscription agencies, then a symbol is put after the price. Information is provided about microform availability as well as the abbreviation to represent the name of the publisher. A separate list of abstracting and indexing services is given, which serves a useful purpose. Index to publications of international organizations is other useful feature.

The information included is based on either what is obtained directly from the publishers or by personal examination of actual publications. *Ulrich's quarterly*, a new publication (began in 1977) brings up-to-date information for new serial titles, title changes and

eessations, closing the interval between two biennial publications *Ulrich's international periodicals directory* and *Irregular serials and annuals*.

The Directory follows a biennial policy of revisions and a supplement is published in between, listing periodicals not mentioned in the previous base volume.

Compared with *Ayer's Directory*, it is more selective and broader in geographical coverage because it includes publications from many eountries. It is a highly reliable tool, and is kept up-to-date. It is an indispensable directory listing periodicals for large academic, special and public libraries. It is the most useful international directory for specialized periodicals.

Irregular serials and annuals : an international directory, 5th ed., New York, Bowker, 1978. This lists 32,500 entries. It covers "irregular serials and continuations such as proceedings, transactions, advances, progresses, reports, yearbooks, handbooks, annual reviews, and monographic series, which is an area between books and serials." It is worldwide in coverage.

It contains, a cross index to subjects (giving key words not used in the subject headings), classified list of serials, cessations, index to publications of international organizations, ISSN index and title index.

Classified list of serials consists of complete entries grouped in over 250 subject categories and within each category further arranged by titles alphabetically. Each entry contains Dewey decimal classification number, country code, ISSN, names of publication, translated title, subtitle, former title or alternative title, sponsoring body, language(s) of text, year first published, frequency, volume number and date of current issue, if irregular, subscription, publisher's name and address, special features, indexed in-, abstracted in-, former title, brief annotation, etc.

This is a companion volume to Ulrich's directory and fills a long felt need for hard to locate irregular serials and annuals.

Ulrich's Quarterly: a supplement to Ulrich's international periodicals directory and irregular serials and annuals, New York, Bowker, vol. 1, no. 1-, 1977-.

It aims to provide up-to-date information "on new serial titles, title changes and cessation, closing the interval of the biennial publications, *Ulrich's international periodicals directory* and *Irregular serials and annuals*." It covers periodicals, irregular serials and annuals. The different sections include: classified list of serials, title change index, eessations and title index. Classified list contains the main

entry, giving basic information, title information, buying and ordering information, abstracting and indexing information, author and edito. information, bibliographic notes. Former titles are listed alphabeti cally under title change index. Cessations are entries for seri which have ceased being arranged alphabetically by title. Title, title changes and cessations indexes are cumulated in each issue.

It provides all the current data one needs to keep current between the editions of *Ulrich's international periodicals directory* and *Irregular serials & annuals*.

Sources of serials, New York, Bowker, 1977.

This indexes international publishers and corporate bodies indica ting serials brought by them.

63 United Kingdom

Willing's Press Guide, Croydon, Thomas Skinner Directories, 1874-, annual.

It concentrates on the British press and provides information about 4600 periodicals and 1200 newspapers, and is an excellent work for large research libraries.

64 Conclusion

The study of directories of periodicals indicates that learned periodi cals are well covered by these especially at the international level. Our objective should be to achieve comprehensive directories for each country, which will form a base. In many cases, directories at the national level do not exist. Those in existence overlap a great deal and are not prompt and comprehensive in nature. For bibliogra phic control, it is essential that we have a complete listing of periodi cals at a national as well as international level.

7 UNIVERSAL BIBLIOGRAPHY

71 Definition

Universal bibliography is that which lists all documents of all kinds of materials, produced in all countries, in every language, at any time, and on all themes. In other words, it is not limited in terms of subject, geographical area, language or form. Thus it is supposed to list all literature that may ever have appeared.

72 Attempts

The attempts towards compilation of a universal bibliography are described on page 361.

Konrad Gesner who is called the "father of bibliography" is well-known for his *Bibliotheca Universalis . . .* (Zurich, 1545). This contained details of about 12,000 books in the learned languages and was arranged alphabetically by author's Christian names. In 1548, Gesner published *Pandectarum sive partitionum universalium*, in which he rearranged the items in the basic work under subject headings. In 1555, he published *Appendix bibliotheca*, in which he added a further 3,000 books.

His was the earliest effort towards compilation of a universal bibliography. Gesner listed, in all, 15,000 books by 300 authors in Latin, Greek and Hebrew along with comments. He excluded books published in vernacular languages. He propounded a system which is applicable universally, especially for the purpose of compiling a national bibliography.

The *Messkataloge* (fair catalogues) of the book fairs held at Frankfurt, 1564-1749 and at Leipzig, 1595-1860 are a form of universal bibliography. These booksellers' catalogues, record books issued by the main European presses during these periods, which had the possibility of international sale. It includes only books in the European languages, and after the middle of the seventeenth century, few books issued outside were included.

Towards the end of the seventeenth century a Frenchman named Abbe Drouyn, who was religious adviser to the Parlement de Paris, made an attempt to compile a universal bibliography based mostly on other catalogues. He was able to compile 321 manuscript volumes.

Towards the end of the eighteenth century, two Italian scholars attempted to use Gesner's plan. The work done by Abbot Marucelli and Father Savanarola is worth mentioning. It reached printed form only in small parts.

In the nineteenth century, people like Robert Watts, Jacques-Charles Brunet, Schrettinger, Petzholdt, Danjoru, Bonnanges, Dilke, Barnvell, Cole, Crestadoro, Hottinger and Erman did work towards compiling a universal bibliography.

About the middle of the nineteenth century concern was expressed in Great Britain and the United States regarding both national and international bibliography. Proposals to bring out catalogues of the British Museum were submitted. Similarly a plan for stereotyping library catalogues was submitted by Charles C. Jewett in USA.

Universal bibliography was attempted with partial success by the Institut International de Bibliographie of Brussels (established 1895, later called International Federation for Documentation). Paul Otlet

and Henry La Fontaine were responsible for this project to which there was considerable opposition. The entries were cut from chief printed catalogues. Over 12 million cards were collected. The project for a world index broke down due to the difficulties inherent in organizing such a large project.

Up to the beginning of the twentieth century, the Institut International de Bibliographie of Brussels was interested in the compilation of a universal bibliography but after the First World War, interest in UB started declining and greater emphasis began to be placed on the compilation of national bibliographies as units of a universal bibliography. Thus UB was abandoned in 1934.

Since the second World War, UNESCO has been emphasizing that "UB is possible only in terms of national units." Therefore it has been encouraging the compilation of national bibliographies all over the world.

Under 'Universal Bibliographic Control' (UBC), a number of national and international agencies are aiming to achieve a global bibliographic network. This is going to be something close to a universal bibliography.

73 Why Completeness is not Possible

A large number of attempts have been made to compile a universal bibliography but nobody has as yet succeeded. It has always remained a dream and is likely to remain one for a long time to come. With the passage of time, its compilation is becoming more and more difficult.

In spite of the fact that the job was almost impossible, bibliographers, over the centuries, have been trying their hand at it due to the fact that they considered completeness in bibliography their ultimate goal. Even up to the beginning of the twentieth century they thought that the problem of bibliography was to list all the written records of the world at one place, so that these become easily available. Now it is desirable that complete listing on a national basis be done. In favour of complete listing is the argument that no one can determine what will be of specific value to the scholars of tomorrow. It is just possible that something considered worthless today may become important tomorrow.

Due to the following problems, it is not possible to achieve completeness in the venture of universal bibliography:

(1) There are many books about which no recorded information is available. Besides, there are many books of which we know only the titles.

(2) There are many books on which recorded information is available but the books themselves are not available for rechecking.

(3) The number of documents to be recorded is so enormous, especially current ones, that it becomes impossible to record them all.

(4) The number of languages is so great that it becomes difficult to know about all recorded materials.

(5) The arrangement of such a bibliography remains a big problem. The alphabetical arrangement is not at all suitable but even in the case of classified arrangement, there is no scheme of classification which could meet all the requirements.

(6) There is a lack of resources and necessary manpower.

Even if it were possible to compile a universal bibliography it would be very difficult to keep it up-to-date.

74 Usefulness

We should try to understand the usefulness of a UB. The basic question arises, is it really essential to document such a large mass of literature, most of which is unimportant and not really worth it?

Even if we are able to compile a UB, most users would find it unusable because of its sheer bulk. If it were compiled, then it would not be possible to print and its usefulness would thereby be reduced.

75 Alternatives

(i) A selective universal catalogue should be a good alternative to UB. This is possible but is not likely to be attempted any more.

(ii) Publication of complete national bibliographies is feasible. Though UNESCO has been encouraging their publication, we are far from achieving the goal as yet.

(iii) The collection of published catalogues of national libraries is a good alternative. The catalogues of great libraries like the Library of Congress (Washington), British Museum (London) (Reference Division of the British Library) and Bibliotheque Nationale (Paris) are good examples of their kind. Taken together, they provide a good alternative approach to an international literature of all periods. It would be still better if we were to use together catalogues of great national libraries, of leading book dealers and auction catalogues, for this would be the nearest we could get in our attempt to achieve a universal bibliography.

76 Conclusion

Up to early modern times, the number of books in existence was

limited and, therefore, a somewhat complete listing was possible, provided complete information could be acquired. UB would remain a dream. It lingers as a sentiment and an ideal to be achieved. However, no one is likely to achieve completeness. Completeness on a broad basis should remain our goal.

At present there is no single record of all the publications, which could provide bibliographical details for all the documents published in the world. However, a number of national and international agencies are working towards a global bibliographic network under 'Universal bibliographic control' (UBC).

8 BIBLIOGRAPHY OF BIBLIOGRAPHIES

81 Introduction

Multiplication of bibliographies of different types has led to the compilation of a bibliography of bibliographies. These list bibliographies which direct readers to useful bibliographies through subject, individual, place, etc. The bibliographies referred to may be in the form of a separately published book or part of the book or part of a periodical article or some other type of document. Once having located the bibliography, one can then locate the individual documents listed in it. As the number of bibliographies published every year is large, bibliographies of bibliographies are highly selective in nature.

82 Retrospective Bibliography of Bibliographies

A world bibliography of bibliographies and of bibliographical catalogues, calendars, abstracts, digests, indexes and the like, by Theodore Besterman, 4th ed., Geneva, Societas Bibliographica, 1965-67, 5 volumes.

This edition records 117,187 fully collated volumes of bibliography, in over fifty languages. It covers books, manuscripts and patent abridgements in all subjects. The bibliographies included, range in time from the fifteenth century to 1963. Thus, it is international in scope.

The entries have been arranged alphabetically under 15,000 headings and subheadings. An adequate number of cross-references have been provided. An index volume provides an approach through names of authors, editors and translators, titles of periodicals and anonymous works, names of libraries and archives, and patents. However, bibliographies which would appear in the index under the same heading as in the text, have been intentionally excluded, though

exceptions have been made in those cases where they appear in the text under more than one heading.

Entry information is very exact. However, no annotations have been provided.

Besterman's work is considered a classic general bibliography of bibliographies. It is an indispensable tool for any type of library, from medium to large. It should be considered the most comprehensive guide to resources. It is especially useful for old bibliographies of all countries and periods.

The fourth edition has been followed by a series of separate volumes under the series called Besterman world bibliography series. These volumes are grouped by subject entries taken from WBB and these entries have also been updated.

Bibliographical services throughout the world, 1950-59, 1960-64, 1965-69, 1970-74, Paris, UNESCO, 1961-77, 4 volumes.

These volumes describe bibliographical services throughout the world, giving a systematic account for different countries. This is a useful publication for retrospective bibliographies.

Bibliographies, subject and national, by Robert L. Collison, 3rd. edition, London, Crosby & Lockwood, 1968.

This provides a wealth of bibliographies, giving a survey of the best of the world's bibliographies and catalogues, along with annotations.

A register of national bibliography; with a selection of the chief bibliographical books and articles printed in other countries, by William Prideaux Courtney, London, Constable, 1905-12, 3 volumes.

This is an excellent work, which is international in scope, and especially strong in English materials. It includes bibliographies published separately as well as parts of books and periodicals. The entries are arranged subject-wise, alphabetically.

Index bibliographicus, 4th edition, The Hague, Federation Internationale de Documentation, 1959 to date.

This lists abstracting and bibliographic services, arranged by *Universal decimal classification*. This is world-wide in scope and is arranged by subject. Items given include title, publisher, address, year of first issue, frequency, coverage (approximate number of abstracts, reviews, etc.), arrangement, indexes, extent of annotations, etc.

It is a useful work for retrospective bibliography.

Bibliotheca bibliographica, by Julius Petzholdt Leipzig, Engelmann, 1886 (reprinted 1961).

This is a standard work, international in scope. For old material, it is very useful and has been provided with carefully prepared

annotations.

Manuel de bibliographie generale; bibliotheca bibliographica nova, by Henri Stein, Paris, Picard, 1897 (reprinted 1961).

This is a useful work for older materials. It is also excellent for subject bibliographies.

83 Current Bibliography of Bibliographies

Bibliographic index; cumulative bibliography of bibliographies, 1937-, New York, Wilson, 1938-, (published three times a year, April, August and a December permanent bound annual cumulation. Permanent cumulative volumes with period of coverage varying, are also available), sold on a service basis.

This is a subject list of current bibliographies. Bibliographies published in both English and foreign languages are listed, provided they contain fifty or more bibliographic citations. Bibliographies published separately as books and pamphlets or appearing as parts of books, pamphlets and articles are included. Approximately 2,400 periodicals in various languages are scanned regularly for bibliographic material, as well as bibliographic lists containing fifty or more bibliographic citations. References to new editions and supplements are also covered.

It follows alphabetical arrangement of bibliographies, and contains relatively current bibliographies about one year old. The bibliographies included are very often taken from periodicals, usually to be found in libraries.

Although about 2,400 periodicals are scanned for bibliographic material yet the bibliography merely covers a very small percentage of existing periodical literature. Bibliographies included are too general for specialists. Thus the latter have to depend on specialized indexing and abstracting services or bibliographies issued in their subjects. If a user is interested in current books and articles on a given subject he should better examine indexing and abstracting services where the time-lag is likely to be less.

Bibliographic index should be considered a basic bibliographical tool suitable for medium or large-sized libraries. It covers not only long bibliographies in books, but also short ones from periodical publications.

Bibliography, documentation, terminology, Paris, UNESCO, vol. 1-,1962-, bimonthly.

This is published in English, French, Spanish and Russian. It describes bibliographical services in various countries giving national activities, projects and current research in bibliography and docu-

mentation. It is an excellent source regarding new bibliographies and bibliographical services in different countries. From January 1979 *Bibliography, documentation, terminology* and *UNISIST Newsletter* have been merged under the title *General Information Programme—UNISIST Bulletin*.

84 Guides to Reference Books

There is a wealth of material appearing as bibliographies. The number of bibliographies has become so enormous that very often a researcher finds it difficult to distinguish the most useful ones. However guides to reference books can be of great help.

These may be considered a bibliography of bibliographies and form a category by themselves. In addition, they include bibliographies, and indexing and abstracting services. Guides are of two types, general and specialized.

Wallford's *Guide to reference materials* and Sheehy's *Guide to reference books* are two remarkable examples of general, basic guides. These list and annotate bibliographies, and indexing and abstracting services. They are selective, listing only the best unless there is nothing good enough in a particular area. Sheehy lays more stress on works produced in the United States, Canada and Latin America. Walford, on the other hand, places more emphasis on the British titles, as well as on works published in Europe. Both provide well-informed and evaluative annotations. Both are not up-to-date. These guides need to be supplemented by other guides. The *American reference books; annual* for example, is a good work of this type.

Best reference books: titles of lasting value selected from American reference books annual, 1970-76, Littleton, Colo, Libraries Unlimited, 1976.

Provides a selection of 818 reference books, giving reviews.

Les sources du travail bibliographique, by Louise-Noel Maeles, Geneva, Droz, 1950-58, 3 volumes in 4.

The first volume of the work lists outstanding bibliographies and standard reference works of all the more important countries, describing them in detail and also evaluating them. This is a very fine handbook.

The following are useful sources of bibliographies on India:

Indiaana: a select list of reference and representative books on all aspects of Indian life and culture, by B. Sengupta, Calcutta, World Press, 1966.

This is a useful list. It is selective, giving full bibliographic details

as well as annotations.

Guide to reference materials on India, compiled and edited by N.N. Gidwani and K. Navalani, Jaipur, ¦Saraswati Publications, 1974, 2 volumes.

This is a comprehensive publication, covering reference, materials, including bibliographies, printed as well as mimeographed in many languages relating to India as well other regions of the Indian sub-continent. This is a useful work, which fills a gap in the listing of reference materials including bibliographies.

Bibliography of bibliographies on India, by D. R. Kalia and M. K. Jain, Delhi, Concept, 1975.

This is an alphabetical subject list of 1243 bibliographies, library catalogues, document lists, abstracts, dissertations, serial catalogues, etc on India. Most of the items included are in English and a few are in Indian languages. Catalogues of manuscripts are also included. An author and subject index has been provided at the end and annotations have been added in some cases. It serves a useful purpose, though the index is too short.

85 Conclusion

The number of bibliographies of bibliographies is quite large. For retrospective bibliographies, Besterman's *A world bibliography of bibliographies* is a remarkable tool. As regard current bibliographies, *Bibliographic index* and UNESCO's *Bibliography, documentation, terminology* (From January 1979 *Bibliography, documentation, terminology* and *UNISIST Newsletter* have been merged under the title *General Information Programme UNISIST Bulletin*) are excellent works. The volumes entitled *Bibliographical services throughout the world* issued by UNESCO is an authoritative multivolumed set, which surveys bibliographical services in different countries of the world. India is also well provided for in this field.

91 INFORMATION THAT MAY BE LOCATED IN BIBLIOGRAPHICAL TOOLS

(*i*) List of books on library science published in India in 1965,

(*ii*) Bibliographical details of the periodical *Library Quarterly*,

(*iii*) Bibliography on environment pollution,

(*iv*) Books in Bengali on linguistics published between 1901-53,

(*v*) List of weekly newspapers in Urdu published in UP.

(*vi*) List of articles on role of cooperatives in agricultural development.

(vii) Complete address of H.W. Wilson (An American publisher),

(viii) Recent Books on information retrieval,

(ix) Bibliographical details about the report of the last education commission set up by the Government of India,

(x) List of best novels in English,

(xi) Bibliographical details about any suitable book on literature of natural science,

(xii) Year of publication of the first book written by W. C. Berwick Sayers on library classification,

(xiii) Price of first edition of *Laws of library science* by S. R. Ranganathan, at the time of original publication,

(xiv) List of writings of John Maurice Clark (an economist),

(xv) Publisher's name, place of publication, year of starting and price of *Indian Journal of International Law,*

(xvi) List of Indian periodicals on Salesmanship,

(xvii) Price of *Children of the uprooted*, edited by Oscar Handlin,

(xviii) Address of Oxford University Press at New York,

(xix) List of daily newspapers published in India,

(xx) Name of the author of "Pashu Bli" (a Hindi drama),

(xxi) Names of libraries in Delhi which are subscribing to *International Studies* (a journal published from Delhi),

(xxii) Address of Navjivan Publishing House,

(xxiii) Bibliography of best books of 1978,

(xxiv) Names of libraries in the UK and USA, which possess 10th volume of *Journal of General Microbiology.*

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DOROTHY ANDERSON, "Universal bibliographic contro l and the information scientist," *Information scientist*, March 1976, pp. 11-12.

RAY ASTBURY, *Bibliography and book production*, Oxford, Pergamon Press, 1967, pp. 123-26, 173-77.

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A. H. CHAPLIN, "Basic bibliographic control: plans for a world system," *Aslib proceedings*, February 1975, pp. 48-56.

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DENIS GROGAN, *Science and technology; an introduction to the literature*, 2nd ed., London, Bingley, 1973, Chs. 8, 18.

WILLIAM HUFF, "Periodical" in Robert B. Downs and Frances B. Jenkins, *ed.*, *Bibliogrophy, current state and future trends*, Urbana, University of Illinois Press, 1967, pp. 62-83.

MARGARET HUTCHINS, *Introduction to reference work*, Chicago, American Library Association, 1944, Ch. 5.

F.G. KALTWASSER, "Updated version with title: quest for universal bibliographical control: beyond man's reach?" *Wilson Library Bulletin*, 46, 1972, pp. 894-901.

WILLIAM A. KATZ, *Introduction to reference work*, 3rd ed., Vol. 1, New York, McGraw-Hill, 1978, pp. 63-94.

JOHN W. KIMBALL, *National union cotalog; reference and reloted services*, Washington, D.C., Library of Congress, 1973.

LEROY H. LINDER, *Rise of current complete national bibliography*, New York, Scarecrow Press, 1959, pp. 27-29.

J. M. PERREAULT, "Reflections on the idea of a universal bibliography," *Herold of Library Science*, 10, 1971, p. 214.

S. R. RANGANATHAN, *Reference service and bibliography*, Madras, Madras Library Association, Vol. 1, pp. 372-78, 418-23, 484-501.

A. M. L. ROBINSON, *Systematic bibliography*, 3rd ed., London, Bingley, 1978, p. 131.

GEORG SCHNEIDER, *Theory and history of bibliography*, translated by Ralph Robert Shaw, New York, N. Y., Scarecrow Press, 1961, pp. 65-66, 90-95.

J. H. SHERA and M. E. EGAN, (eds.), *Bibliogrophic organizotion*, Chicago, University of Chicago Press, pp. 34-37.

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ARCHER TAYLOR, *History of bibliographies of bibliogrophies*, New Brunswick, N. J. Scarecrow Press, 1955.

L. T. THOMPSON, "Biblomania," *Encyclopedia of librory ond informotion science*, New York, Dekker, 1969, Vol. 2, pp. 422-32.

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25 TECHNIQUES AND METHODS OF ANSWERING REFERENCE ~~QUESTIONS~~

0 INTRODUCTION

A NSWERING of reference questions on demand is an important aspect of reference service. The libraries have been providing this kind of service for a long time. The techniques adopted in answering reference questions are fundamentally the same in different types of libraries. However, neither the questions asked follow a definite pattern nor the methods to search for answer follow a set line of action. In practice, the procedures adopted depend upon availability of documents, kind of query, intuition, experience and capability of the reference librarian, etc.

1 REFERENCE QUESTION

It is rather difficult to define a reference question because there is a difference of opinion. A research question falls outside the scope of a reference librarian and it should be distinguished from a reference question. Questions belonging to readers' advisory service involving advising people on what to read should be differentiated from reference questions. It is also true that in libraries, where there is no separate readers' advisory service, then reference section would also have to handle readers' advisory questions.

According to Hutchins, "a reference question is defined as a request from a patron of a library for information of a definite nature which he expects to be found in printed materials and their like or for a certain work or works not readily located in the library."[1] The use of the term, 'of a definite nature' would be difficult to sustain in some cases because the request may not be clearly defined and the user himself may not be sure as to the definite nature of information sought.

[1]Margaret Hutchins, *Introduction to reference work*, Chicago, American Library Association, 1944, p. 20.

2 TYPES OF REFERENCE QUESTIONS

We may categorize reference questions from different angles. Each approach provides us with a different angle to look at the requirements of the users.

By general categories. We may divide questions into four general categories, namely, directional, fact or ready reference, specific search and long range search.

In directional type of question, a user only needs to be directed. He may ask, where is the periodicals section? Where are dictionaries? Where is textbook section?

In fact type questions, the answer can be found readily. What is the height of Mount Everest? When was Jawaharlal Nehru born? The reference librarian would be able to find the answer from reference books placed on the reference desk.

In questions requiring specific search, one may be required to find limited amount of information on the topic, involving search into number of sources of information. The query may be, "I want to write an article on Mahatma Gandhi. What do you have on him?" He may be given books on Mahatma Gandhi available in the library and the reader might feel satisfied.

A long range search query would be the one, which cannot be answered from one or two sources. It would require the use of many specialized sources of information. One may have to consult periodical articles, manuscripts, etc. Sometimes, one may be required to consult sources, outside the library. Why public libraries in India did not develop before 1947? Somebody may request for a complete bibliography of the works of S.R. Ranganathan.

It is not always possible to demarcate a line between different categories. At times, a question may prove to be a combination of any of the four categories.

By subject. Here the questions are analyzed by subject. This would indicate predominant subject interests of the users.

By sources of information. Here questions are analysed on the basis of sources of information from which the answers are found. Broadly speaking, we may divide these into primary, secondary and tertiary sources of information. Within each category, we may subdivide it on the basis of types of publications.

By inquirer. The questions can be categorized on the basis of kinds of users, who make use of reference services.

By kind of reference books. The reference questions can be categorized by kind of reference book. Thus we may get class of questions

about background, words, trends, people, places, organizations, facts, activities, list of documents, illustrations.

By type of question. We may recognize various types of questions, concerning background, a recent event, words, a fact, how to do, trends, evidence to support an idea, verification of a reference, new theory or idea or innovation, has somebody already done it, all about it, etc. This categorization can still be expanded.

3 WAYS OF RECEIVING REFERENCE QUESTIONS

The following are the ways in which questions are asked or received:

(i) *Direct approach by a user*: A user may approach the reference desk and pose a query to the reference librarian. The advantage of this approach is that a reference interview can be held, which would help in putting the query in proper perspective. The reference librarian would also come to know the background of the user, which sometimes may be necessary for providing the information to serve his specific requirements.

(ii) *On telephone*: The query may be posed on the telephone. The disadvantage of this approach is that it provides less scope for reference interview.

(iii) *On telex*: If the library is connected on telex, then it may receive the query on telex. There is some scope for seeking clarification about the question.

(iv) *Through post*: The user may send a letter and seek information through post. The disadvantage of this approach is that it provides no scope for reference interview. However, a reference librarian can always write back to seek clarification, which may prove to be a lengthy process. One advantage seems to be that the reference section can take time and search for information at non-busy hours.

(v) *Offer by reference librarian*: Some of the users may be too shy to approach reference desk. A user may be found struggling with the catalogue being unable to locate the desired information. A reference librarian should approach such a user who may be at a loss and offer to help him.

4 STEPS INVOLVED IN ANSWERING REFERENCE QUESTIONS

The steps involved in answering reference questions are shown on by means of a flow chart:
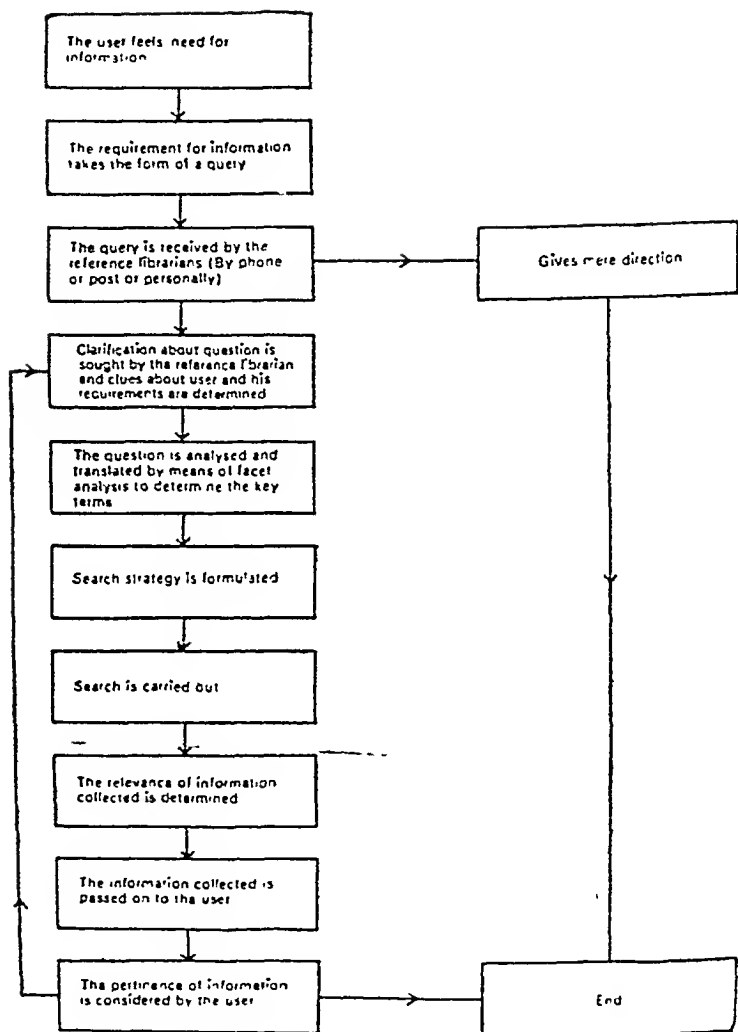
Notes: (a) Very often clarification about question/query may involve refinement of the statement of the question, so as to achieve clear-cut enunciation of the question. This may involve a dialogue between reference librarian and the user.

(b) Search strategy is the line of action chalked out for searching of information.

(c) Relevance means one, which is related to the answer to the question posed by the user.

(d) Pertinence means related to the answer required to serve the needs of the user at the moment.

In case the question posed by a user to a reference librarian does not reflect the needs of the user correctly, then the answer may be relevant but not pertinent. Similarly, if a reference librarian is not able to interpret the needs of a user correctly, then again the answer may be relevant but not pertinent. As such reference librarian would be expected to go back to take further steps.

Having located the documents considered relevant to the user's question, the reference librarian should examine the level of the documents. This is a question related to the level of attainment and needs of the user. In case his requirement is for elementary works, then advanced works should be left out. Such kinds of decision-making cannot be taught in a library school, one learns by experience.

The amount of information required by a user would depend on a number of factors. An average user would feel satisfied with a few documents which are pertinent rather than a large number of relevant materials. However, a researcher doing research on a topic might require all the documents, which are relevant. On the other hand, a student studying in school would be satisfied with a few documents. He would require less information. This shows, that the concepts of relevancy and pertinency must be interpreted in relation to the kind of the user being served. At each stage of search, a reference librarian must ask himself: Is it relevant? Will it serve the needs of the user concerned?

The following examples would illustrate the steps to be undertaken.

Example 1

Location: A large public library.

STEP I *Stating of question*

    User: Where do you keep biographical dictionaries?

STEP II *Tentative answer*

    Reference librarian: Over there

STEP III *Seeking clarification of the question in terms of the actual requirements of the user* (determine the parameters)

    Reference librarian: What are you looking for?

    User: I want to read about the life of Wright Brothers.

    Reference librarian: Do you know who they were?

    User: They were the first to fly an aeroplane.

    Reference librarian: In which context do you need information?

    User: I want to write an article on the history of aviation.

    Reference librarian: What do you know about the subject?

User: I know very little about aviation.

STEP IV *Analysis of the question*

The analysis showed that books and articles on history of aviation (even on aviation) might serve the purpose.

STEP V *Listing of possible sources, which might contain or lead to the information.*

New Encyclopaedia Britannica,

Encyclopedia Americana,

McGraw-Hill Encyclopedia of science and technology,

Books on history of aviation (even on aviation),

Articles listed in *Applied science and technology index,*

Any journal in the field of aviation,

Readings given at the end of encyclopaedias.

STEP VI *Search for information*

Consulted the sources listed above and prepared a list of likely items. Examined personally the items, which are likely to contain information. Selected those ones, which seem to be less technical in nature and relevant.

STEP VII *Pertinence of the answer*

Once relevant literature has been collected, then the user was asked, whether or not it meets his requirements. The user felt satisfied.

Note: If under step VII, we find that the user is not satisfied, then we may have to go back to step III and take further steps. The number of steps and order of the steps will vary depending upon various factors.

Example 2

Location: A university library

STEP I *Stating of question*

User: I want comprehensive information on "ceasefire in Vietnam,"

STEP II *Seeking clarification of the question in terms of the actual requirements of the user* (determine the parameters)

Reference librarian: In which connection do you need this information?

User: I teach history in a local college and I want to write an article for our college magazine.

Reference librarian: Do you want material in English as well as in Hindi?

User: I want material in English only. I want to limit myself to the events, which led to the ceasefire.

STEP III *Analysis of the question*

> Translated the query with the help of facet analysis and determined the key terms.

STEP IV *Formulate search strategy*

> It is assumed that the reference librarian possesses enough background about the topic. On giving a thought it was decided to consult the library catalogue, indexing and abstracting services (e.g., *Readers' guide to periodical literature, Social sciences index, Bulletin of the Public Affairs Information Service, Keesing's contemporary archives, Asian recorder, Facts on file*) for the period, when ceasefire took place. (In case the library is issuing a documentation list, then that should also be included. If the library is maintaining a clippings file, it would be found useful).

STEP V *Carry out the search*

> Examined the sources mentioned above. Prepared a list of the items, which might serve the purpose. Located the documents containing the information (In case the library possesses a ready bibliography, that would be found very useful).

STEP VI *Determine relevance of the items*

> Examined personally each document located in step V. Determined their relevance.

STEP VII *Pertinence of information is considered by the user*

> Passed on the relevant documents to the user. He was asked to decide for himself as to what is pertinent or not (If he is not satisfied, then the reference librarian will go back to step II). The user felt satisfied.

Note: (a) If the reference librarian does not possess enough background on the topic, then he may have to read a good article(s) on the topic or he should have further dialogue with the user. The user is likely to know about the topic to some extent.

(b) At any stage, if the need arises, the reference librarian can ask for further clarification from the user.

(c) The search would probably require more than half an hour, therefore, if it is a rush hour, the user can be requested to come later and collect the information.

(d) If reference section is short of staff, then the reference librarian may prepare a list of likely sources of information (as done in step IV), make these available to him and request the user to help himself. He may be told that in case of a problem, he may consult him.

Example 3

Location: A university library

STEP I *Stating of question*

User: I want to know the address of a leading public library located in Ahmedabad.

STEP II *Seeking clarification of the question in terms of the actual requirements of the user* (determine the parameters)

Reference librarian: Do you know the name of the public library?

User: No, I do not remember the name.

STEP III *Analysis of the question*

Analysis indicated that first the name of the particular library must be found out, only then the address can be located.

STEP IV *Formulation of the search strategy*

It was decided that a book on public libraries would perhaps indicate the name of the leading library. The consultation of the library catalogue would tell about books on public libraries. Once the name is known, then a directory can be used to locate the complete address.

STEP V *Carry out search*

The library catalogue referred to a number of books on public libraries. The catalogue listed *Public library survey*, edited by A. Neelameghan, which was considered most likely to provide the required information. The same book was located on the shelf and on examination, it mentioned M.J. Public Library as the major public library in Ahmedabad. Next, consultation of the latest edition of *World of learning*, gave a complete address.

STEP VI *Pertinence of information considered by the user*

The information was presented to the inquirer. He said, "this is what I wanted."

Note: The above approach shows that there is no set procedure in doing search. The steps to be taken would depend upon different factors. The knowledge of the resources is an important consideration.

Example 4

Location: A school library

STEP I *Stating of question*

User: Sir, I want to read about ancient Egypt.

STEP II *Seeking clarification of the question in terms of the actual requirements of the user.*

Librarian: In what connection do you need information.

User: I want to make a project covering different aspects of Ancient Egypt such as customs, traditions, religion, social conditions, science, arts, etc.

Librarian: In which class do you study?

User: I am a student of nineth class.

Librarian: Have you read anything on Ancient Egypt.

User: I am familiar with basic facts about the civilization of Ancient Egypt.

STEP III *Analysis of the question*

Determined the key terms.

STEP IV *Formulate search strategy*

It was decided that any encyclopaedia would provide a good account. Therefore, it was decided to consult *World book encyclopedia*, which contains illustrations and also further readings.

STEP V *Carry out the search*

Librarian: The library possesses *World book encyclopedia*. It contains a good description about the topic of your interest. It also provides illustrations and further readings.

User: Could you please tell me where the book has been placed.

Librarian: *World book encyclopedia* is a reference book. Therefore, it has been placed in the reference section. A reference book is not issued. Therefore, you will have to consult it in the library. Let me show you the location of the book.

Note: The librarian takes the student to the reference section and points out to various categories of reference books. He pulls out the index (volume 22) to the *encyclopedia*. He locates an entry in the index indicating the reference to volume number and page number. He explains how to use an index. Next he pulls out the specific volume containing the information on the topic and opens the relevant page.

STEP VI *Determine relevance of the item*

Personal examination shows that article in the *Encyclopedia* was relevant.

STEP VII *Pertinence of information is considered by the user.*

User: This is exactly, what I wanted. Thank you, sir,

Librarian: In case you need more information, you are welcome to contact me.

Note: Here the librarian tried to be helpful. He explained the use of index. As a result the student would be able to consult the *Encyclopedia* on his own.

Example 5

Location: A School Library

STEP I *Stating of question*

> User: Sir, I want some information about Einstein's Theory of Relativity.

STEP II *Seeking clarification of the question in terms of the actual requirements of the user*.

> Librarian: In which class do you study?
>
> User: I am a student of tenth class.
>
> Librarian: Do you want a brief description or detailed information?
>
> User: I would like to read a brief description regarding the theory.
>
> Librarian: How much do you know about the theory?
>
> User: My knowledge about this theory is negligible.

STEP III *Analysis of the question*

> The information would be found under A. Einstein and Theory of Relativity.

STEP IV *Formulate search strategy*

> It was decided that a bibliography of A. Einstein would provide a good description.

STEP VI *Carry out the search*

> Librarian: Recently, we received a biography of Einstein. I am sure, it will serve the purpose. This book will be found under 'biographies of scientists', the class number being 925 (*Dewey decimal classification* number). Let us go to the shelf.
>
> Note: The Librarian locates the book and opens the index.
>
> The entry under 'Theory of Relativity' leads to the description of the theory in the book. He explains the use of the index to locate information in the book.

STEP VI *Determine relevance of the item*

> Personal examination shows that book was relevant.

STEP VII *Pertinence of information is considered by the user*

> Librarian: Here is the description.
>
> User: Thank you, sir, I am highly obliged.
>
> Librarian: In case, you need additional information, then you can consult *World book encyclopedia*.

Example 6

Location: A special library

STEP I *Stating of question*

> User: I want to read about 'occupational hazards in glass industry.'

STEP II *Seeking clarification of the question in terms of the actual*

    requirements of the user (determine the parameters)

Note: There was no need to seek clarification because the reference librarian knew the background of the user and the project on which the user was working currently.

STEP III *Analysis of the question*

Analysis indicated that two facets were involved and query was well formulated by the user.

STEP IV *Formulation of the search strategy*

It was decided that the search should be started with encyclopaedias such as *Encyclopaedia Britannica* and *International encyclopedia of social sciences*. These would give background information. In the next step, indexing services such as *Applied science and technology index and British technology index* should be consulted. It was considered that the indexing services would guide to suitable literature. It was decided to search under 'glass industry,' 'occupational hazards' and 'hazards.'

STEP V *Carry out search*

Encyclopaedia Britannica (The library did not have the 15th edition) gave information about glass industry. *International encyclopedia of social sciences* provided good deal of information about economic aspect of glass industry. The consultation of indexing services listed in Step IV yielded a number of recent articles on the topic. The periodical issues containing three articles were traced in the library.

STEP VI *Determine the relevance of the items*

Examined personally the three articles and found them relevant.

STEP VII *Pertinence of information considered by the user*

The periodical issues were presented to the inquirer. He said, "This will do."

Reference Librarian: In case, you need more articles on the topic, then I will get xerox copies of other articles from local libraries.

User: In case, the three articles do not serve the purpose, then I will give you trouble again.

5 THE REFERENCE INTERVIEW

When a user needs information, he may approach a reference librarian and make a request for information. This act of communication is not as simple as often made out. The request should be put forward by a user so that a reference librarian can understand it pro-

perly or the question should be framed whereby the organization of the library will reveal the clue. The request can be made personally or by post or by telex or telephone. It is desirable that a user should be requested to fill up a service demand slip. In case, the request has been received by post or telex or telephone, then the slip may be filled up by the reference librarian. Sometimes, a reference interview between the user and reference librarian may be necessary. It is a kind of interaction which may take place in the beginning or later on. During the period of search relating to a given query, if required, a reference interview can be held more than once. In case the user approaches personally, then there is a full scope for such an interview. For a query by phone, and telex there is less scope for interview. As regards query by post, there is hardly any scope for it.

51 Purpose

Reference interview is an attempt to understand and appreciate the user and his request for information. It aims to determine what the user exactly wants in terms of type, level and kind of documents or information. It also attempts to clarify the question itself.

52 Importance

This is an extremely important aspect of providing reference service. Some people go to the extent of saying that half the battle is won, if a reference librarian succeeds in finding exactly as to what the reader really wants.

53 Procedure

Service demand slip: A user should be requested to fill up a service demand slip. For a simple query, it may not be necessary to get the slip filled up. Otherwise the user will feel irritated. The reference librarian himself may fill up essential items in the slip to maintain a record of queries. When the inquirer is asked to fill the slip, he would be in a better position to express his requirements. Reference staff would be able to use it as a record of their work. This record can be used for various purposes. It would be useful for the evaluation of the work of reference section. It can help in improving reference service. The contents of a service demand slip will vary from library to library.

A sample form is given on the next page.

NAME OF THE LIBRARY
Service Demand Slip

Name of the user.....................

Status..................... date ....

Address...............

Qualification............... Telephone|number ....

Area of specializations...............

Languages known to be able to read..................

Description of the query...............

Any special consideration...........

(e.g., aspect of the subject, level, how much information, language, time, confidential, etc)   (continue at the back)

For the use of the library

Service rendered on............ at ....

Time taken..........

Sources of information used.........

Any lesson............

If service could not be given, give reason............

Name of staff.........

Status.........

Determine exact requirements of the user : The basic problem is to find out exactly what the user really wants. Very often, the question posed by a user is expressed in general terms much broader than his actual requirement. He may ask, "I want something on mathematics" but actually, he might be interested in algebra.

In view of above reasons, a reference librarian should try to seek the following information:

Determine, whether he is interested in the subject of his inquiry generally or only in a particular application of the same.

Find out the scope of answer to inquiry in terms of comprehensiveness (answer should be selective or comprehensive), period (recent or any period), form of materials (books or articles or anything), languages, area (either area of coverage or place of publication), level of readers (elementary or advanced materials) etc.

Find out in what connection he needs information.

Determine, when does he need information? That is how soon is the information required.

Try to know, whether the inquiry is confidential in nature.

Know as much as possible about the user: One should try to find out the name, qualifications (academic and professional qualifications, experience, standard of the knowledge of the inquirer, knowledge of languages besides English), status, address, telephone numbers, etc. The use of service demand slip serves the same purpose.

Try to appreciate his point of view: Find out how much search has already been done by the user. What sources of information have already been consulted?

Reference librarian should be frank. If he does not know enough, then he should not hesitate to ask more questions regarding the topic of inquiry.

Try to understand the psychology of the user: One important area is the area of non-verbal communication. It consists of any message or meaning which is not conveyed directly and intentionally by means of verbal communication (that is by means of words). A gesture (nod or grunt) or a facial expression (a smile or tenseness or distortion of the face) or the way in which the user walks could give an indication of satisfaction or dissatisfaction. It is considered that understanding of non-verbal communication can be of a great help to a reference librarian in bringing together a right book and a right reader. The reference librarians do not know much about this field. Psychologists and sociologists have done some research on this area. Therefore, reference librarians should take advantage of such knowledge. Similarly psychologists and sociologists have carried out a good deal of research on verbal communication. Reference librarians should make use of their knowledge to achieve better understanding of the users.

54 Considerations to be Kept in View

A reference librarian should keep the following considerations in view during reference interview:

Every inquiry should be considered equally important. Whatever might be the nature of a query, it should not be dismissed off hand.

The approach of the reference librarian towards the user should be that of 'May I help you?' In order to seek clarification, if necessary, appropriate questions may be asked keeping in view personality cues gathered by a reference librarian. The questions may take the form of 'Why do you need information' or 'In what connection do you need information' etc. But it is much better, if questions are put politely in a form such as: "It would be extremely helpful if you would kindly, indicate in what connection do you need the required information." If the user is made to feel that he is important, then it will go a long way to make the user have confidence in the reference librarian.

Reference librarian should encourage the user to talk without inhibition about the query and the information needed by him. This will certainly encourage the user to give necessary clarification regarding the query posed by him. In this context it is essential that a reference librarian should be a good listener making a note of verbal and non-verbal cues, which could prove to be useful for finding information.

Helpful attitude is extremely important. One should not only appear to be helpful but should be helpful. Suppose information is not readily available, then reference librarian can say "We do not have the desired information" or "We do not have ready information but we will try to get it for you." The preference should be for the second reply.

Do not merely accept a query at its face value without giving it proper consideration. Keep in view that a user can be wrong. Sometimes a user might lay emphasis rather loudly about his query being expressive of his requirements. The louder his emphasis more doubtful the reference librarian should become. It is just possible that spellings can be wrong or he may lack proper understanding of the terms employed in his query.

Very often, his query would be broader than his actual requirements.

In case, the user is a subject specialist, then he would think that he knows better than the reference librarian. Even a specialist can be ignorant about certain things in his own field.

55 Duty of the User

It is the duty of the user to formulate his question or inquiry, correctly and to provide enough background information in order to enable the reference librarian to provide a satisfactory answer. However, it does not free the reference librarian from performing his duty

to understand the requirements of the user and also put the inquiry in a right perspective.

56 Controversy About Users

There is a widespread belief among librarians that the inquirers usually cannot frame their inquiry in specific terms. However, there are others, who believe that this is not exactly true.

A user may not be able to frame his inquiry in specific terms due to the following reasons:

(i) User may not be aware of the ability of a modern reference librarian to be able to assist him.

(ii) User may possess inferiority complex. As a result he may not be able to express his requirements properly.

(iii) Due to the limitations of knowledge, a user would present his question in terms of what he knows. Thus, if a person is ignorant in a particular field, then that would affect his presentation of the query.

(iv) The user may have a poor image of the librarian. It would not be wrong to say that many of the users have a wrong notion that library staff is ignorant about the subject(s) of their interest. This may ultimately lead to lack of confidence.

(v) In case the inquiry is too specialized in nature, then the user would think that the reference librarian would not be of much assistance to him. The users should be made to realize that a reference librarian with experience and knowledge of the world of books and technique of finding information, can be very helpful.

A user should be able to frame his inquiry much better if:

(i) the user is of average intelligence (The intellectual capability of the user matters a great deal),

(ii) the person is a regular user,

(iii) the user is aware of the facilities provided by the library and the philosophy of reference service practised in that library.

Comments. From above, it becomes clear that the users need to be educated. For instance, many of the users think that library staff is ignorant of the subjects of their interest. The users should be told that through experience, a reference librarian is able to know enough about the subject to the extent that he can assist them effectively in retrieving the information. They should be made to realize that a reference librarian is not required to know the subjects in depth like a specialist. Confidence should be inculcated in the mind of the users. If the user has confidence in the ability of a reference librarian, then he is more likely to formulate his query in specific terms.

57 *Duration of Reference Interview*

The time limit for holding reference interview cannot be specified. However, a reference librarian should spend more time, if the query is found to be not of a clear-cut type.

58 *Conclusion*

In reference interview, a reference librarian and a user interact with each other. If the inquirer is a bossy type and does not care to have a dialogue with the reference librarian, then reference librarian will not be able to get exact requirements of the user. However, if the reference librarian is capable, intelligent and tactful, who understands the psychology of readers, then possibly he would be in a better position to make the user realise that cooperation is mutually beneficial. The user should be treated with respect and reference librarian should not try to unnecessarily dominate the situation.

Reference interview is an important step. It leads to the elucidation of the query. A reference librarian should attempt to place each query in a proper perspective. He should help the user to formulate the query correctly. Enough information should be collected by him through reference interview so that information can be searched and provided to the user in an effective manner.

During the course of search, if need is felt for seeking further clarification from the user, then a reference librarian should not hesitate to contact the user and hold a dialogue with him.

From above, we may conclude that reference interview is more of an art rather than a science. Its success will depend upon the capability and experience of a reference librarian as well as cooperation from the user.

6 AFTER THE REFERENCE INTERVIEW

Once the reference interview is over, then the reference librarian depending upon the kind of query and his ability to provide the information would take one of the following decisions:

(*i*) The query may be such that he may not feel it essential to provide exact information. Thus the user may be given a mere direction.

(*ii*) The reference librarian may be in a position to provide exact information because it may be readily available. Thus the user may be given exact information immediately.

(*iii*) It is just possible that search for information may require a long range search or the reference librarian may be too busy. In

that case the user may be requested to visit the reference desk again at a specified time. Here, a reference librarian must make it sure that no further clarification is necessary about the request.

(*iv*) The reference librarian may be comparatively free or it may be the kind of query, which may require further clarification from the user or the reference librarian may be sure that he would be able to find the information within a reasonable period of time. In such a situation, the user may be requested to stay on, meanwhile the search can be conducted.

7 FORMULATION OF SEARCH STRATEGY

Search strategy means laying down of the line of action. This will depend on the (*a*) kind of question, (*b*) availability of standard works on the subject, reference materials including bibliographies, indexing and abstracting services, (*c*) experience of the reference librarian, and (*d*) time available for conducting search. Search strategy requires the translation of the query into terms of the language of the reference system.

In order to formulate search strategy, one should take the following steps:

Analyse the query or question. For this purpose, one can use facet analysis. Determine the specific subject and ascertain all the facets and isolates for each in different facets of specific subject. Mentally construct the class number of the specific subject sought by the user.

Classify the question. Consider various aspects of the question and make corresponding hypotheses as to the materials which are likely to contain information. List all the likely sources of information in the order of priority. List subject headings or key terms. Also put down the rough class number.

Three broad possible approaches are possible in the search for information. These are given below:

(*i*) The reference librarian may know nothing about the specific subject of inquiry. He will have to start from dictionaries and encyclopaedias to understand the terms used in the inquiry and then proceed to other sources of information like indexing and abstracting services. Here he may have to make systematic search and proceed from broader to narrower field.

(*ii*) The reference librarian may have broad knowledge about the specific subject of inquiry. In that case, he will start from the point to which his previous knowledge will take him to. He would have

broad idea about indexing and abstracting services likely to serve the purpose. He would know, which portions of shelves and card catalogue to consult.

(*iii*) The reference librarian may have a great deal of knowledge about the specific subject of inquiry. As such he would proceed directly to the shelves and lay his hands directly on the sources of information, which are most likely to contain information. In this case, he would not be required to make a systematic search.

8 SEARCHING FOR INFORMATION

Information has become an important national resource. Timeliness of providing information is an important factor. This is often crucial to a specialist engaged in research or a manager involved in taking an important decision. Timeliness can be vital for a layman, who might need information for the sake of his survival.

The following points should be kept in view, while searching for information or documents:

(*i*) Proceed from general to the particular. For instance, from general sources of information go on to specialized sources. But a knowledgeable person can go to the sources of information directly.

(*ii*) In case of lack of time, one should start from most likely sources rather than proceeding systematically.

(*iii*) Generally, one should start from latest documents to earlier ones.

(*iv*) For latest information consult documentation lists.

(*v*) In case, a library is maintaining a clippings file, then it will be found extremely helpful.

(*vi*) We should not neglect general encyclopaedias for specialized information. The same can be said about other reference tools. For example sometimes, it has been found that a general biographical dictionary might provide more information than a biographical dictionary in the subject.

(*vii*) Textbooks can be very good for getting information of various types.

(*viii*) Occasions will arise when no reference book may be able to provide an answer. Then monographs on the topic can be useful. Suppose, one wants to find out 'which state in India produces maximum coal.' Then a monograph dealing with minerals in India might provide the answer.

(*ix*) If it is known that an outside agency would be able to provide information promptly, one should take its help. But in this respect,

one should proceed carefully. If the assistance of outside agencies is sought too often, those may hesitate to help sooner or later.

(*x*) It is a good idea to give something to the inquirer, while the reference librarian goes elsewhere in search of information.

(*xi*) If reference librarian cannot find answer then he should consult his colleagues and finally take help from an outside library.

(*xii*) If necessary, an interim reply may be given or sent to the user.

(*xiii*) Assimilation of the results of search can be useful.

(*xiv*) Answer can differ from source to source (e.g., height of Mount Everest).

91 CONCLUSION

Reference interview is an extremely important step. If the attempt has not been made properly to determine the exact requirements of the users, then all further steps will go wrong.

We have seen that there is no definite pattern or methods for search of information. The procedure of finding information will vary from person to person depending upon various factors. However, there are certain broad generalizations, which should be kept in mind. The success of finding information would greatly depend upon the experience of the reference librarian. The kind of experience matters. The experience can be gained on the job only.

In order to provide effective reference service, it is being increasingly realized that a reference librarian should possess subject knowledge in handling reference queries. This can prove to be an asset. In dealing with unfamiliar area of universe of knowledge, one would come across terms, about which one may hardly know anything. In such circumstances, one would expect a clear explanation of these in an encyclopaedia or a dictionary. However, experience shows that these are not always found to be helpful. Therefore, such a query should better be passed to another colleague, who is supposed to know the subject. The other alternative would be to seek clarification from the user himself.

In order to provide an answer to a query, a reference librarian should make use of his experience, knowledge, judgment and intuition to the best of his ability.

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26 THEORIES OF REFERENCE SERVICE

0 INTRODUCTION

A theory of a subject consists of a body of principles. It provides a sound footing and scientific basis to the subject. It helps in the advancement of the field. A theory provides guiding principles, which are of great assistance in solving day-to-day problems.

The libraries in USA and UK began to offer reference service on regular basis from late nineteenth century but it was not based on any theoretical concepts. It was in 1930 that James I. Wyer became the first person, who made an attempt towards putting forward a theory of reference service. However, his theory was inadequate as it was confined to the subject of inquiry work only. In 1940, the first edition of Ranganathan's *Reference service and bibliography*[1] appeared. This book as well as his later writings on reference service are based on a theory of reference service. He did succeed in analysing the concept of reference service effectively. He considered reference service as the ultimate function of any library, big or small. He was of the view that reference service is the ultimate manifestation of the laws of library science. Many developments have taken place since that time but even today, we have not succeeded fully in building an adequate theory of reference service. The main reason seems to be that reference service has been developed as a subject of practical utility without much attention being paid to its theory. At least there is one aspect of reference service, namely, compilation of bibliographies, which is based on a sound body of principles belonging to the field of systematic bibliography.

There are still many differences of opinion regarding different aspects of reference service. There are some who believe that a reference librarian in a public or academic library should give more emphasis to instructing users to find information/documents on their own rather than provide the required information itself. There is also difference of opinion whether library instruction should be provided

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[1] S.R. Ranganathan and C. Sundaram, *Reference service and bibliography*, Madras, Madras Library Association, 1940.

by a reference librarian or a staff member of the library, who has specialized in user instruction.

Due to a lack of adequate theory, reference librarians do not know the precise nature of service to be rendered by them. This hinders in the provision of reference service in an effective manner. Due to these reasons, reference librarians have provided reference service more or less on the basis of their practical experience.

A sound philosophy of reference librarianship generally acceptable does not exist. Thus a reference librarian has to form his own philosophy to suit the local situation. The decision has to be taken on the basis of experience. Newspapers and magazines sometimes provide question-answer columns. Similarly radio and TV include quiz programmes. These all aim to provide answers to queries of interest to masses. Similarly library is one more source of information. Newspapers, magazines, radio, TV, etc., are popular media. Experience shows that the library has its place and it should not aim to become a substitute to popular media. However, there is no complete agreement as to the place of a library with respect to popular media because a sound philosophy of reference service does not exist.

Not only there is a lack of adequate theory but even there is no agreed terminology. An attempt to standardize terminology would prove to be an important step.

In order to achieve an adequate theory, research should be carried out regarding scope, terminology, nature and aims, divisions, content and relationships of reference service with other branches of library science as well as other disciplines like communication studies, linguistics, logic, sociology, statistics, etc.[2] The research would help in the formulation of concepts, which may be applied to investigate reference service and the principles lying behind it. However, it may be mentioned that any good reference theory is a practical theory based to a large extent on practical experiences.

1 CONSERVATIVE, MODERATE AND LIBERAL THEORIES OF REFERENCE SERVICE

James I. Wyer[3] has recognized three theories of reference service, namely, conservative, moderate, and liberal. We may regard these as

[2]Kenneth Whittaker, "Towards a theory for reference and information service," *Journal of Librarianship*, 9, 1977, p. 60.

[3]James I. Wyer, *Reference work*, Chicago, American Library Association, 1930, p. 6.

three different approaches for providing documentary information to users. Different types of libraries prefer different approaches. Quite often the approach adopted by a reference librarian may depend upon the category of user being served.

11 Conservative

This theory is based on the supposition that occasional personal assistance to users is more than sufficient. Assistance should be limited to instruction and guidance only. An inexperienced or a perplexed user needs to be pointed out the way only. Here the aim is to provide the books to the users and keep out of their way to the possible extent. Those who believe in this theory consider too much of assistance would hinder the attempt of a user to become self-dependent. As such users should be allowed to use the resources of the library on their own without any hindrance from the reference librarian. A reference librarian should not approach a user unless requested to by him. He is not expected to adopt the attitude of 'May I help you.' Thus the assistance provided by a reference librarian should be limited to tackle ordinary reference questions, requiring the use of ready reference tools. Each query should be finished in short time.

12 Liberal

Conservative theory of reference service is one extreme of service and liberal theory belongs to the other extreme. Here a reference librarian is supposed to provide assistance to the maximum. A reference librarian should go out of the way to give help to the users. In case, a user feels perplexed or confused, a reference librarian should approach him and say, 'may I help you.' Time, kinds of sources of information required, source of their availability and other such considerations do not matter. Information has got to be provided at any cost. The effort to locate information may require an extensive search. For example, one may be required to trace origin of a particular concept or compile a documentation list or get a document on inter-library loan.

13 Moderate

Moderate theory represents a compromise between the two extremes. It represents a middle path. However, it is difficult to demarcate a fixed line. An average reference librarian should prefer this approach. In case, the number of users to be served is large, then the provision of assistance to the maximum would increase the cost. Therefore,

under these circumstances, a reference librarian would have to adopt moderate theory of reference.

2 MINIMAL, MIDDLING AND MAXIMUM THEORIES OF REFERENCE SERVICE

Samuel Rothstein[1] has recognized three theories of reference service, namely, minimal, middling and maximum. These theories are based on primary concept of fear, expediency and faith respectively. These three concepts are mutually independent and often come in conflict. The conflict has been explained in the proceeding pages.

21 Minimal

A reference librarian, who lacks confidence and does not possess the necessary ability is apt to have a fear in his mind. As far as possible, he would try to keep himself out of the way of the user. Therefore, he would provide minimum assistance to the user. Thus minimal theory of reference service is based on the primary concept of fear. A reference librarian may know his job very well but due to pressure of demand, he may be able to provide only mininum assistance. In that case fear cannot be considered as the basis of minimal service.

22 Maximum

A reference librarian, who knows his job well is apt to have confidence in his ability to provide reference service. Such a person would have faith in his capabilities to serve the users and would even go out of the way to help users. In case, he finds a user confused or perplexed, he would approach him and say that 'May I help you.' He would be in a position to provide maximum help to the users. The maximum theory of reference service is based on the primary concept of faith. As pointed out earlier, a reference librarian may have full faith in his capability but due to pressure of demand, he may be unable to provide information itself. In that case faith exists but minimum assistance is given not due to fear but because of circumstances over which the reference librarian may have no control. It is just possible that the reference librarian may not know the answer himself but may take the help of one of his colleagues and be able to give full information. Thus we can see that the very intention of providing information can overcome the lack of confidence and produce effective results.

[1] Samuel Rothstein, "Reference service: The new dimension in librarianship," *College and Research Libraries*, 22 January 1961, pp. 11-18.

23 *Middling*

A pragmatic reference librarian might decide to provide reference service to the extent considered suitable for the occasion. What would be considered suitable is difficult to define. However, such a decision is based upon judgment and commonsense of a reference librarian. Sometimes, a reference librarian would provide maximum or minimum assistance as the occasion might demand. The theory of reference service based on primary concept of expediency (suitable to the occasion) is called middling theory.

3 LAWS OF LIBRARY SCIENCE

Ranganathan's writings on reference service are based on five laws of library science. The five laws are fundamental laws of library science. These are equally applicable to reference service.[5]

The first law says, "Books are for use." The term book should be interpreted broadly to stand for document. The first law would feel satisfied, if a right book and a right reader can be brought together. The aim of reference service should be to achieve the same. A collection of documents would not be used fully unless a reference librarian makes efforts to help the users to help themselves. This personal service would lead to greater use of books.

The second law says, "Every reader his book." Here emphasis is on the reader. A reference librarian should know the readers and his requirements, so that he can provide right books/information for every reader.

The third law prescribes, "every book its reader." The emphasis is on a book. A reference librarian should know about the world of books and try to find out a reader for every one of these. He should find out who will benefit most from a given book. Thus he should act as a canvassing agent for each book.

The fourth law says, "save the time of the reader." A user must be assumed to be a busy person and his time must be saved. This is possible if the reference librarian is an alert person, who knows about the collection and makes an attempt to provide information/documents to the users promptly. The services like current awareness services, provision of short range reference service and long range reference service on full scale, etc., are important means of helping the readers, so that their time can be saved.

[5]S.R. Ranganathan, *Reference service*, 2nd ed., Bombay, Asia Publishing House, 1961, pp. 53-60.

According to fifth law, "a library is a growing organism." The library will grow in terms of documents, readers and staff. The new books received by the library should be brought to the notice of the readers. Even earlier books lying on the shelves should be brought to their attention. As a library is able to acquire only a small percentage of books, therefore, it must resort to inter-library loan. New readers must be given instruction in the use of the library resources and provided assistance to the maximum.

4 COMMENTS

41 General

There was time, when the theory of reference service was to provide books to the users and keep out of his way to the possible extent. The reference librarian was not supposed to approach a user on his own. He was expected to wait for him to come and seek his assistance. This was in tune with the objectives of a library.

The times have changed and the concept of reference service has also undergone a change. The library is no more considered a storehouse but it is a service institution. Throughout this book, we are dealing with a service library, which exists to provide service to its users. The kind of theory of reference service to be accepted would depend upon the answer to the question. WHAT SHOULD BE THE PHILOSOPHY OF REFERENCE LIBRARIANSHIP? The simple answer is that we should try to follow the laws of library science. Of course the implications of these laws are not equally simple. In practice, the theory to be accepted would depend upon the objectives of a given library.

Our aim should be to provide maximum assistance to users. Thus we should prefer liberal theory (Maximum theory) of reference service. However, the pragmatic approach would be to provide assistance suited to the occasion. At a busy hour, a reference librarian would merely direct the user. At another time, when he is comparatively free, he would be willing to provide complete information. If the person is an important one or too busy, then he would have to be given special attention. In practice, very often, middling theory (moderate theory) of reference service is practised. However, the theory to be applied differs from library to library.

42 Academic Libraries

In an academic library, a great effort is made to educate the users. While at the same time, answers are provided to queries brought by

selected users. Instruction is given regarding how to use the library. This may involve instruction in the use of reference books, library catalogue, etc. The aim being that the users should be able to use the library effectively and also be able to help themselves. It must be admitted that reference librarians have failed to educate the users.

Provision of maximum help is rare. Middling theory based on the concept of expediency or moderate theory of reference is practised more often. Liberal theory or maximum theory is difficult to apply because the number of users to be dealt is too large and it is also not required because it is generally accepted that the students, research scholars (to a large extent, it is also true of teachers except senior teachers) should be educated and be able to use the library on their own.

43 Public Libraries

In a public library a great deal of stress is laid on educating users. Because of limited resources in terms of finance, personnel and materials, the approach of the reference librarian would depend upon what is considered suitable for the occasion. In this respect a reference librarian would be guided by his judgment and commonsense. Of course provision of maximum information is made occasionally. More often, readers would be directed to the sources of information rather than provided with the information itself. Thus middling theory based on the concept of expediency (moderate theory) of reference service is practised more often in public libraries.

44 Special Libraries

The special library exists for the sake of its clientele. It aims to serve the objectives of the parent body. The time of researchers is valuable and must be saved. In a special library, very often the, users have to be helped to the maximum. More often, information has to be provided in a ready form. It is required and also expected. This means that educating the users is ruled out. However, the author is of the view that educating the user should be done even in a special library but it should be done in a very sophisticated manner so that the user is not made conscious of the process of getting instructed. Thus liberal theory (maximum theory) of reference service is expected to be followed in a special library.

5 CONCLUSION

A sound philosophy of reference librarianship, which should be

generally acceptable does not exist. This is a big handicap to any reference librarian. The basic question in this regard is that should a user be provided a complete answer to his query or taught to find out his answer or merely directed to the sources of information. The first involves liberal theory (Maximum) of reference service and the third is concerned with conservation theory (Minimal), where the user is told about the sources of information, rather than provided the information itself. The aim of the second approach is to educate the users. However librarians have failed to educate. But reference librarians need not abandon this aim. In the final analysis, the decision in this regard would be taken by a reference librarian on the basis of his judgment and commonsense, keeping in view the objectives of the library and resources in terms of finance, personnel and materials made available to him. There is no one answer but the answer is "it all depends."

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27 ORGANIZATION OF A REFERENCE SECTION

0 INTRODUCTION

A library is a social institution with interdependent parts organized into a system. A reference section must be organised, keeping in view that it is a part of an organized system. The quality of reference service will greatly depend upon proper organization of a reference section. Organization of a reference section varies a great deal from library to library.

1 QUALITIES OF A REFERENCE LIBRARIAN

First of all, a qualified and efficient reference librarian should be appointed, who should be asked to organize the section.

He should possess the following qualities:

He should be a scholar possessing encyclopaedic mind, retentive memory and ability to systematize knowledge. He should be widely-read, possessing basic knowledge of books. He must be intellectually honest like any genuine scholar.

He should be an expert in understanding of human relations.

He should believe and follow philosophy of service to users. Thus he should be courteous, helpful and willing to appreciate point of view of others. He should possess a general ability to form good relationships and be able to get along with others reasonably well.

He should be mentally alert and tactful.

He should possess self-confidence.

He should have enough capability and possess flair for accuracy of details.

He should possess awareness of community activities.

He should be aware of what is going on in the other sections of the library.

He should understand the needs of the users.

He should possess good understanding of the communication sources.

He should be familiar with the organization of the library materials. He must thoroughly understand the rules of a catalogue code as well as the scheme of classification used in the library.

He should have a thorough knowledge of the collections of library especially the reference sources. For this, he should try to keep himself well informed through constant perusal of documents and as much reading as he can possibly do.

He should possess natural flair and aptitude for reference service. When necessary, he should be able to make use of intuition to provide reference service.

He should be well informed and keep himself up-to-date regarding the latest developments in the field of reference service including reference sources, technique of compiling bibliographies.

Experience on the job is an extremely important qualification. But the kind of experience matters. Experience of working in a first rate reference section can be a great asset.

He should possess high academic and professional qualifications as given below:

He should possess at least a master's degree in one or other discipline. However, it is true that the master's degree of several Indian universities is no better than a bachelor's degree from any leading foreign university. In a special library, we would prefer specialization in the subject of interest to parent organization. A specialist researcher would prefer to communicate with a subject specialist.

In a large library such as university or public, most often, an average reference librarian is able to handle specialized queries. But occasionally need would arise to provide information of specialized nature, which would require subject specialization on the part of a reference librarian

He should possess a professional degree in library science/information science.

He should have a working knowledge of a regional language or a foreign language other than English.

2 ROLE OF A REFERENCE LIBRARIAN

A reference librarian provides material as well as information. However, emphasis is on providing material or information on demand. He usually waits for the readers to come. Very often, he will guide the reader to a source of information rather than give him exact information. One of his main aim is to train the readers to use the sources of information on their own.

The job of a reference librarian is quite difficult. It requires special qualifications including certain skills. Therefore not everybody can become a successful reference librarian. His job is such that he

comes across joys and frustrations. In case, he succeeds in satisfying the requirements of a user, then he gets appreciation. This may lead to joy. On the other hand, a failure can lead to disappointment and frustration. Successes and failures are a part of the game. Thus he should take these in their strides. However, his success as a reference librarian should not go into his head. He should constantly be in search of answers to the questions posed by his users. Whenever he comes across any piece of information, then he should ask himself, 'which user would require it?'

The role of a reference librarian is extremely important. The image of a library would be greatly determined by the quality of reference service provided by him. The documents are acquired and processed for use. The aim of a reference librarian is to encourage and assist the users to achieve maximum and most effective utilization of the resources of the library.

3 ORGANIZATIONAL PATTERN

The normal practice in a modern library is to have a separate reference section under a reference librarian. However, in a small library, there may be no separate reference section. The librarian himself may also be responsible for reference service. In a medium-sized library, there may be one or more persons looking after reference service. In some libraries, reference and circulation are combined together to form one section. In a large set-up, reference section may be a large section having several persons, each with different area of specialization. In large libraries in India, the question of employing persons in reference section on the basis of their specialization has not been given enough attention.

Reference service may be provided by: (1) general reference section or (2) general reference section plus divisional based libraries or sections (science and technology, social sciences, the humanities) or (3) general reference section plus subject based libraries or sections. The second and third approaches represent divisional pattern and subject departmentalization pattern respectively.

There exists a controversy of centralization *versus* decentralization regarding reference service. Those in favour of centralization feel that a central reference section would have well-qualified staff and an adequate collection at its disposal, therefore, it would be in a better position to provide reference service than a decentralized set-up. However, those for decentralization claim that in a decentralized set-up, specialized reference materials would be conveniently

available to reference staff and it would also be possible to use specialized staff working in departmental libraries to provide reference service in specialized areas of study.

Whatever may be the pattern to be followed, a user who approaches a professional working in a particular section for a reference question relating to that section should be provided all assistance. If a query received by reference section is of specialized nature, it may be passed on to a staff member (other than reference staff), who is supposed to know better.

4 ORGANIZATION OF WORK

If a number of persons are engaged in reference service, then their work must be coordinated by the head of the section. He should by training, experience, and personal qualities be capable of directing people. He should know what is happening elsewhere. Thus, he should possess qualities of leadership. This will enable him to get the maximum out of his staff. He should decide as to when the user be told that the answer cannot be found.

In a large library, the work of reference section be so organized that at least one professional should be available in the reference section during all the hours, the library is kept open. During peak hours, more professionals should be employed keeping in view the demand for reference service. In a medium or small library, at certain hours, may be no professional is on duty, then reference service should be provided by professionals working in other sections.

It is essential that a distinction is made between professional and non-professional jobs. The professionals should attend to pro-fessional work leaving non-professional work to be done by others. In case, a document is to be located, a non-professional can do the job. If it is the compilation of a bibliography or a documentation list, the job should be assigned to a professional. The work of pro-viding ready reference service or long range reference service should be done by the professional staff. In no case, such jobs should be handed over to a non-professional.

In a large set-up, the head of the reference section should delegate certain responsibilities to specific persons. The responsibilities may include maintaining of vertical files, addition of new reference works, dealing with reservation work, inter-library loan work, main-tenance of press clippings, etc.

5 LIBRARY EDUCATION AND TRAINING

50 Introduction

Reference service is an extremely important service provided by a library, therefore due attention must be given to the recruitment, education and training of professional staff for reference section. The education and training of reference staff must be of a high standard so that those trained are capable of providing reference service of high order.

51 Library Education

In Indian library schools, the subject of reference service is taught as essential part of the certificate of Library Science and Bachelor of Library Science courses with varying emphasis. Specialized courses are taught at the Master of Library Science and Master of Library and information Science levels (it may be a full-fledged course or part of a course). Art of reference service is one of the most difficult areas to teach.

52 Aims

The aim of library education should be to train scientists and not mere technicians.[1] As such a reference librarian must know the why, how and what of techniques required for his job.

53 Certain Considerations in Teaching

The aims, functions and techniques of reference service should form the basis of the course. This is essential because it will enable students to acquire the background necessary for practical work in reference section of a library.

Very often, the aim of teaching reference service is to help students memorize as many titles and brief descriptions of reference sources as possible. As far as possible students must not be expected to remember unnecessary facts. The emphasis should be on obtaining understanding of the process of providing reference service rather than the mere accumulation of facts. Students should be given wide acquaintance with important reference works. Detailed study in areas of specialization should be done at advance-level master's courses. Students must be expected to handle reference sources personally. They should be told in no certain terms that there is no other way of learning about tools except for examining and using them perso-

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[1]S.R. Ranganathan, "University courses in library science with special reference to the M. Lib. Sc. course," *Annual Seminar* (DRTC), 1972, Vol. 1, p. 23.

nally. However, due emphasis should be given to the learning of local reference sources.

The teacher should teach the students as to how to use library resources effectively. The teacher should emphasize upon students that everything should be done by a reference librarian so that library resources are put to maximum use. A reference librarian should stimulate the use of libraries and also teach users as to how to use a library. Teaching of users may not be expected in many of the special libraries.

54 Methods of Teaching

The following methods of teaching reference service may be adopted:

    (i) Apprenticeship method,

    (ii) Practical method,

    (iii) Case study method,

    (iv) Discussion method,

    (v) Role playing method,

    (vi) Find-me-out method, and

    (vii) Lecture method.

Apprenticeship method. In this method, a beginner is attached as an apprentice with a reference librarian in a library. Here the beginner observes the work of a reference librarian. This will provide him orientation to reference service and also prepare him for giving reference service to users. He should record his experiences in a note book.

Practical method. A student of reference service should also be expected to do practical work in reference service, involving answering queries from the users. This should be done in the reference section of a library under the full guidance and supervision of the teacher. Supervision becomes essential because the student may not annoy the user or irritate him. If found necessary, the teacher can help the student to find out the information. The student should be expected to record his experiences. It may be added that practical method should follow apprenticeship method as a logical sequence.

Case study method. The teacher prepares the record of a reference encounter in a library. This may be presented in written or tape-recorded form. The same is used as a basis for discussion in the class. The case should be prepared carefully and it should be controversial in nature. Although case study method can be used in teaching reference service but it is found more effective in teaching of library administration and management.

Discussion method. In this method the students are expected to

participate in discussion on a given topic (or reference book). This helps in creating self-confidence among the students. It enables the students to participate actively in the learning process. The teacher acts as a discussion leader. He should ask questions about the topic or reference tool being discussed, so that students can feel encouraged to express their views. It is the duty of the teacher to keep discussion within the prescribed limits.

Role playing method. Here an attempt is made to enact the situations in a classroom setting. In order to enact a situation, a student may be asked to become a user and another be requested to act as a reference librarian. The rest of the students can serve as observers and consultants for participants. It should be planned properly, choosing the theme, characters and dialogues rather carefully.

Find-me-out-method. Here the student is given a list of questions of various types and asked to find out the answers. As a part of the answer, a student should be expected to describe the methodology followed, based on the steps given later. One important step would involve listing the possible sources of information in the order of priority before the start of actual search. Actual search will indicate whether or not his guess was right. This will enable him to draw lessons for future. Each student should be expected to follow the following steps:

   (a) Analyse the query with the help of the facet analysis.
   (b) Prepare the list of possible types of sources, which are likely to contain information giving reasons.
   (c) Consult the catalogue to know the exact titles of the sources and other bibliographical details, if necessary.
   (d) List the sources on priority basis.
   (e) Consult the sources and find the relevant information.
   (f) Compare the sources and determine reasons as to why the information being sought was not available in certain sources.
   (g) Draw lessons for future.

Once the students have been taught about a category of reference sources, they should be given a list of questions relating to that category. The questions should be such, which can be answered from the sources available in the library. These should aim to test the familiarity of the students with sources of information. Experience shows that this is an effective method.

Lecture method. Lecture method is an indispensable method but it should be combined with discussion method. There are certain topics, which can be best taught through lecture method. Lectures, can be made interesting by bringing case studies from practical

experiences.

In the teaching of reference service, the above methods should be carefully telescoped with regard to time factor. Teaching should be done in the class room and in the library. Reference service is a subject which is difficult to teach in the class room environment. The knowledge about principles, which forms its basis can be acquired by study but the art of reference service or finding answers to queries can be learnt only by working in the reference section. There is no substitute. Therefore, at least half of the time should be spent in doing practical work in the reference service under the guidance and supervision of the teacher. Except for lectures, rest of the teaching should be done in small groups. For successful teaching of reference service, it is essential that a well-developed reference section of a library should be available for the purpose.

55 *Training on the Job*

The job of providing reference service is a practical one. Library education can provide the theoretical background as well as some practical training, but the real experience is obtained while training on the job and later, working on the job There is no substitute for experience. One learns as one works.

The head of the reference section must give due attention to the selection and training of reference librarians. The training must be planned and executed properly. He must take personal interest in this matter. It will go a long way in training persons suitable for the section. The training should try to instil a sense of confidence in him to tackle any reference question.

During the course of training, the person should work in different sections of the library. This will enable him to know what goes on in different sections. This has relevance to his work on the job.

6 LOCATION

A reference section should be a separate one. Reference desk (or information desk) is an essential part of any reference section and it should be located near the entrance and as well as near the public catalogue. The reference collection should be located nearby. The reference section should be connected to other sections within the library.

7 DOCUMENTS

Location. The books, which a reference librarian has to use constantly

should be available at the reference desk. These should include the latest editions of important reference books suitable for ready reference service. These can be helpful in answering readily simple fact type questions. In some of the libraries as high as 75 per cent of the simple fact type questions can be answered with these. The list of such works suitable for an Indian library is given below:

Columbia encyclopedia

Comprehensive English-Hindi dictionary, by Hardev Bahri

Shorter Oxford dictionary

Familiar quotations, by John Bartlett

India: a reference annual

Times of India directory and yearbook

Statesman's yearbook

World almanac

Whitaker's almanack

World of learning

India's who's who

International who's who

Gazetteer of India: Indian union

Columbia Lippincott gazetteer of the world

Statesman's yearbook world gazetteer

Keesing's contemporary archives (current volume)

Asian recorder (current volume)

Times of India index

Local telephone directory

Union catalogue of periodicals available in the local libraries

Guide to reference books, compiled by Eugene P. Sheehy, 9th ed., Chicago, American Library Association, 1976.

Besides the latest editions of above reference works, pamphlets, off prints, clippings, prospectuses of educational institutions, certain textbooks and treatises (if necessary) may be kept at the reference desk. Other reference works should be kept nearby. The older editions should be preferably kept elsewhere.

Note. The above list is merely a suggestive one, it is not exhaustive. Bibliographies, indexing and abstracting services have not been included because very often these are made available in the periodical section. The list will vary from library to library depending upon the kinds of reference questions received at the reference desk, the organization of reference services and the local situation.

Arrangement. In general, there are following three possibilities:

(a) Reference books on a subject may be placed with other books on the subject,

(*b*) General reference books may be at one place and reference books on a subject be put with other books on the subject,

(*c*) All reference books may be put at one place.

Out of the above three possibilities, usually (*c*) is preferred because this arrangement is found convenient by the users as well as the reference staff.

Selection. The reference books are costly to purchase, therefore these should be selected carefully. The criteria for their evaluation described in this book may be used for their selection.

8 SERVICES

We may divide services into three groups, namely: (*a*) basic ones: (*b*) those performed usually, and (*c*) those performed sometimes. The grouping has been done keeping in view the existing situation in Indian libraries.

81 Basic Services

These are those services, which every library should try to perform. This is the minimum, which we can expect. That is why, we may call these as basic services.

It is suggested that the following services should be regarded as basic ones:

(*i*) Provision of general information,

(*ii*) Provision of specific information, and

(*iii*) Assistance in the location (or searching) of documents or use of library catalogue or understanding of reference books, etc.

82 Services Performed Usually

The following are the services performed usually:

(*i*) Inter-library loan,

(*ii*) Reservation of documents, and

(*iii*) Library instruction:

(*a*) General instructions in the use of library, and (*b*) Special instructions required to use the tools like library catalogue, bibliographies, reference works, microfilm reader, etc.,

(*iv*) Library tour. Take them around the library,

(*v*) Holding of library exhibitions including display of new additions to the library,

(*vi*) Issue of library use permit to casual users (non-members),

(*vii*) Contributing to or preparing library publications,

(*viii*) Readers' advisory service (to guide in the selection of documents),

(*ix*) Indexing and abstracting services,

(*x*) Compilation of bibliographies,

(*xi*) Maintenance of clippings,

(*xii*) Maintenance of vertical files containing pamphlets like prospectuses, reports, etc.

The above services have been described in detail in Chapter 2.

83 Services Performed Sometimes

The services performed sometimes are listed below:

(*i*) Display of current periodicals,

(*ii*) Maintenance of special files, e.g., files relating to the present activities, past correspondence of the parent body,

(*iii*) Reproduction of documents (xerox, microfilming, etc.),

(*iv*) Translation service.

Besides the above services, a reference section may have to perform the following functions:

(*i*) Book selection,

(*ii*) Processing of theses and dissertations,

(*iii*) Maintenance of library catalogue,

(*iv*) Shelving of books,

(*v*) Binding, and

(*vi*) Any special project.

Strictly speaking, the above functions do not fall within the purview of reference section. At the best, reference section can assist other sections in performing these functions. For instance, if a reference section notices weakness in a particular collection, then the same can be brought to the attention of book selection section.

The kinds and qualities of reference services to be provided depend upon the policy of the parent organization. As policies keep on changing, therefore kinds and qualities also undergo changes. Priorities of reference service have not been well defined in practice. However, priorities are decided on the basis of the policy of the parent body. As a matter of fact due to various factors, priorities keep on changing.

91 EQUIPMENT AND MATERIALS REQUIRED

The following equipments should be made available in the reference section:

(*i*) Reference desk,

(*ii*) Telephone,

(*iii*) Vertical files for keeping pamphlets, clippings, etc.,

(*iv*) Record of answered questions,

(*v*) Constantly required reference sources, and

(*vi*) Reprographic machine (in Indian libraries, reference sections are not provided with reprographic machines).

92 REFERENCE MANUAL

It is a record of all the decisions made during the course of day-to-day work. It is useful for beginners as well as others. A manual should include processes and rules. This would indicate as to what one is expected to do. It is a must especially for a large library. It may be maintained on cards or in a loose leaf notebook. In its preparation, already printed or mimeographed reference manual can be very helpful.

Such a reference manual should include information about the following items:

(*i*) Organization of reference section,

(*ii*) Functions of each staff member,

(*iii*) Records and statistics to be maintained,

(*iv*) Forms used,

(*v*) Procedures to be followed, and

(*vi*) Objectives of the reference section.

93 ANNUAL REPORT

A written report with statistical appendix should be prepared annually. The same should include discussion regarding personnel problems and problems relating to work. Suggestions for improvement of work, changes in methods, etc., should also be covered in it. This may form a part of the annual report of the library.

94 STATISTICS

It is important to collect minimum amount of statistics. Statistics are invaluable for measuring the efficiency of a reference section. These can be used to put forward claim for increased staff and financial commitment. These are useful for preparing an annual report and planning for a new service. Very often, statistics may be demanded by the management or a relevant committee.

The following statistics may be kept by a reference section:

Number of questions asked and answered in terms of ready refer-
ence service and long range reference service.

Analysis of questions by: (*i*) letters, (*ii*) personally, and (*iii*) tele-
phone.

Number of questions, which could not be answered,

Number of books received on inter-library loan,

Number of books sent on inter-library loan,

Number of books, which were located on request,

Number of books, which could not be located,

Number of reservations made,

Number of pages reproduced,

Number of translations procured,

Number of bibliographies compiled as well as number of pages
covered and number of entries included, and

Number of articles indexed and abstracted.

Statistical methods should be used to collect, present, analyse and
interpret statistical data. Statistics are quantitative in nature and as
such these fail to indicate qualitative aspect. Therefore, these should
be used carefully.

95 EVALUATION OF REFERENCE SERVICE

951 Need

Evaluation means to find out as to how far the objectives are being
met and to make specific recommendations for improvement. The
need may exist to find out how good are the services being rendered
by the reference section. It may be carried out to find justification
for expenditure on a service of this kind or the need might be to put
forward a case for more support in terms of staff and reference
collection. Evaluation can reveal as to what has been achieved and
what should be done to improve the matters. Evaluation can lead
to improvement in overall performance through reducing unnecessary
routines, use of labour-saving devices, improving certain services etc.
It has led to the conclusion that there is a relation between instruc-
tion in library skills and patron satisfaction, which helped in the im-
provement of reference service.

952 Who should do it?

Evaluation may be done by a member of the reference staff or other
staff members of the library or by an outside library expert.

Self-survey by a member of the reference staff may prove to be
embarrassing or may not carry weight with authorities. He would

hesitate to criticize or make drastic suggestions, which might offend his colleagues. An outside library expert, who is an expert by experience and training may have certain advantages. The evaluation is more likely to be objective in nature. His evaluation may command enough official and public attention to lead implementation of recommendations. He can look at facts and statistics with a fresh point of view.

953 Types

We can have quantitative and qualitative analysis of reference service. Quantitative analysis is certainly important but it can easily lead to conclusions, which may be faulty. The quality of reference service is extremely important. We can go to the extent of saying that basically reference service is a qualitative service. Therefore, qualitative aspect must get precedence.

954 Methods

The first consideration in evaluation of a reference section is to prepare a STATEMENT OF OBJECTIVES of reference service in clear terms. This will enable the head of the section or any body else doing evaluation to know whether or not the section is doing its job well.

The following methods may be adopted:

(i) Interpretation of library statistics over a period of time,

(ii) Application of standards based on averages,

(iii) Carrying out surveys, using questionnaires and interview method,

(iv) Comparison with other libraries,

(v) Reporting by the head of the reference section to the chief librarian (this may be a continuous process).

Reference service is basically as qualitative service, therefore it is difficult to measure. This means that evaluation of reference service is not easy to carry out.

We can measure various aspects of reference service as given below:

(a) Study the records maintained by reference section. For this purpose the following kind of data may be used:

(i) Number of persons, who used reference service,

(ii) Number of questions asked and answered in terms of ready reference service and long range reference service,

(iii) Number of questions asked in terms of method of receiving them (by post, by phone, personally, etc),

(*iv*) Number of questions and kind of questions, which could not be answered (calculate these in terms of percentages out of total questions),

(*v*) Number of questions handled per professional member (American Library Association standards are available for this purpose),

(*vi*) Average time spent per question,

(*vii*) Average cost per question,

(*viii*) Number of books received on inter-library loan,

(*ix*) Number of books, sent on inter-library loan and cost of per item,

(*x*) Number of books, which were located on request,

(*xi*) Number of books, which could not be located,

(*xii*) Number of reservations made,

(*xiii*) Number of pages, reproduced,

(*xiv*) Number of translations procured,

(*xv*) Number of bibliographies compiled (as well as number of pages covered and number of entries included), and

(*xvi*) Number of articles indexed and abstracted.

The above data for a period of time would indicate the extent of success or failure of reference service. The available standards may be applied for the purpose of evaluation. It is difficult to collect reference statistics. An annual report can be used as a source for above data. Use of reference statistics to measure effectiveness of a library is full of problems because it becomes difficult to relate these to quality of response in terms of effectiveness or speed.

(*b*) Examine the qualifications of the staff, by applying the standards.

(*c*) Evaluate the collection with special reference to reference collection. The same can be measured by comparing it with standard lists, if available.

(*d*) Carry out a users' survey and find out the purpose of the requests of readers (research study, teaching, etc.), whether he got, what he wanted. If not, why he could not and also determine the reasons for the same. The survey will also indicate the views and suggestions of the users.

(*e*) Prepare a table for expenditure on reference material as compared to total expenditure on books. Table should be compiled over a period of time. The table will give an idea about attention paid to building of reference collection.

(*f*) Keep a suggestion book, where the users can record their views and suggestions for improvement of reference service.

(*g*) Use a videotape to record the dialogue between a reference

librarian and a user. Videotape self-evaluation has been attempted at Orlands Public library system. It serves to show, how helpful the reference libraries appear to be and also helpful they really are to the public being served. It is a costly and time-consuming process and has been found to be useful.

(*h*) Edward B. Reeves[2] etc., have described a method to obtain self-evaluation of roles in a library reference 'service. The first step undertaken was to obtain a complete list of activities performed. 93 activities were outlined. On the basis of interviews and observations, 4 areas of evaluation for 93 activities were isolated such as importance, interest, confidence, and complexity. Each staff member in the reference section was asked to rate each activity on a seven-point scale. From this a mean score and variance were calculated for each activity with respect to importance, interest, complexity and confidence. The mean score referred to average rating given to each activity on each evaluative scale. The variance was considered as a measure of the extent to which ratings given by different staff members were dispersed. Specific activities were grouped into 5 categories on the basis of related functions (instructional activities, skill maintenance activities, patron service activities, maintenance activities, and surrogate activities). Surrogate activities are those which are performed by reference staff on behalf of other departments of the library. Then analysis of data for functional categories was carried out. This led to interesting conclusions.

Comments. We lack standards to measure various aspects of reference service. There is a need for research to set up standards for Indian libraries. Only then we can evaluate reference service effectively. However, the basic consideration should be 'whether or not users feel satisfied.'

In the light of evaluation, the services offered by a reference section can be improved. New services may be introduced. Certain services could be modified or completely dropped. In the light of evaluation, modifications of routines can be carried out. A case for more staff or financial assistance can be prepared.

96 CONCLUSION

A reference section (in a one-man library, there may be no separate reference section and the same person may also be responsible for reference service) is considered an important section of a library.

[2] Edward B. Reeves etc., *Before the looking-glass*, RQ, 17 (no. 1), 1977, 25-32.

The services provided by it can make or mar the image of a library to a large extent. Therefore, this section must be planned carefully and maintained as an efficient one. For this purpose, one must apply scientific management to organize and administer it. However, it is also true that the success of a reference section greatly depends upon possession of right documents and knowledge of how to get the maximum out of these materials. Above all the man on the job matters a great deal. It is difficult to predict the demands that might be made upon a reference section. Therefore, it is not easy to organize the work of this section.

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28 NEW DEVELOPMENTS

THE scope of reference service is vast and the subject, dynamic. Many new developments have taken place in this field during the last ten years or so. The rapid advances have occurred in computer technology, telecommunication (including satellite communications), printing, reprography, etc. There has been increasing attempt to automate information processing and dissemination. These advances have important implications for the provision of information by libraries to their users. Some significant developments are described in the following pages.

1 APPLICATION OF COMPUTERS

11 Information Technology

Due to developments in the information technology, we find ourselves on the threshold of a revolution. A social revolution is taking place which is making it possible for information to be made available to the farthest corners of the globe. While the bibliographical sources may not be directly available to a user, still he can have access to information thanks to the latest information technology.

The essence of the latest technology lies in enormous storage capability of the computer, coupled with speed in retrieval of information. The revolution is only a decade old. The advent of third-generation computer has made all this possible. It is now posssible to make bibliographical information available, so to speak, at your door steps. All that is needed is a terminal to be accessible to one connected with a data base.

12 Networks

Since the data base may be located either in the country or outside its geographical boundaries, physical accessibility to bibliographical sources or actual source material is immaterial. All that is necessary is to link the local terminal with a centralized data base.

The developing situation is thus a direct assault on the concept of a traditional library expected to be a store house of knowledge. The social revolution lies in the fact of centralization of information

at selected points in the country or possibly in the whole world. The national barriers in respect of dissemination of information have begun to give way in favour of international cooperation.

The local information networks shall thus get linked up with national networks which in turn have their international ramifications. The idea of international cooperation is thus very much inherent in the situation. It is thus not necessary to built bibliographical information data banks at local levels. The judicious utilisation of resources at local, national and international levels shall assure tremendous economy in terms of resources on the one hand and a large base to operate on the other. Considering the cost of bibliographical tools and thus increasing inability of the libraries to equip themselves adequately in this respect, the availability of such resources at one central point coupled with their accessibility should take the worry off the minds of librarians. It is thus not difficult to envisage the situation in respect of academic libraries of future in India of placing heavy reliance on resource sharing through a national academic information network. While the information may be centralized or decentralized through resources sharing, the dissemination of information would be certainly decentralized. All this becomes feasible due to the latest information technology.

13 On-line Service

We have so far dealt at length with large implications of the latest technology without spelling out as to how it operates in actual practice. The advent of third-generation computers has made it possible for those to be employed for the purpose of information retrieval. The third-generation computers make it possible to build up out vast data bases and the instantaneous retrieval of information stored in them. It is worthwhile only when the information retrieval is relevant for the purpose of the user. This is now increasingly possible. The real breakthrough, however, took place with the on-line service being provided through a terminal in the form of typewriter or visual display (television) screen.

The term 'on-line' has been defined variedly. In practice, it is understood to be a terminal attached to a centrally-operated computer either by a direct line or over the telephone network. There are three entities involved: the user, the intermediary and the terminal. The role of the intermediary is most crucial because he is responsible not only for the initial introduction of the user but also act as stand-by technical consultant.

The user is also required to have preliminary understanding of

how the system works. The command language in an on-line system does the trick. The user is thus presumed to have acquaintance with the common language before he can hope to enter into a dialogue with the computer.

14 Bibliographic Data Bases

Basically, most of the on-line systems function as the on-line bibliographic retrieval systems. The computer has decided advantage over the printed word. The number of subject indexes in which a document gets listed in a printed index is fairly limited primarily due to the consideration of space. The data base stored in the computer does not suffer from any such inhibitions. It should thus be possible for a single document to be listed in as many places as there are facets of the document.

There is no delimiting factor inhibiting the size of the data base. The speed of the retrieval is another factor in favour of the latest information technology. There is no messing about searching for relevant bibliographical references for diverse sources physically scattered all over the library. The bibliographical references to the relevant material get screened to a pin-pointed degree. The search time is absolutely minimum.

Most of the on-line services yield information data. The actual documents are usually obtained by ordering through mail or inter-library loans. The 'turn-around time' from the stage the document is ordered to the time it is received is usually 2 or 3 weeks.

The ultimate solution is through full-text storage and its retrievel by computer devices. The day is not far off when such an ideal situation shall be reached. We are thus reaching a situation when not only the bibliographical references but the actual text of documents can be made available in a 'home-delivery' system.

At present over 300 bibliographic data bases are available. Most of these are highly specialized intended to serve the requirements of subject specialists.

Some of the important computer-readable bibliographic data bases are described below:

The data base, MEDLARS, was set up in 1964. The aim was to serve as a method to produce printed version of *Index medicus*. In 1968, on-line searching of MEDLARS was achieved. In the year 1972, MEDLINE (MEDLARS on-line) came into being. By 1977, its coverage became extensive. This on-line service includes citations from *Index medicus* and other indexes (*e.g.*, *Population index*, *Index to dental literature*, *International nursing index*).

The CA condensates, set up in 1968, is a weekly computer data base. It corresponds to the printed version entitled *Chemical abstracts*. However, computer data base does not include abstracts. Thus the computer version will point out only the citations. The user will be referred to printed version, where he will also find abstracts.

BIOSIS Previews (Biosciences Information Service of Biological Abstracts): The printed version consists of *Biological Abstracts* and *Bioresearch Index*. BIOSIS Previews is a machine-readable data base, a combination of the two printed services. However, the data base does not provide abstracts. But only citations are printed out. For abstracts, one has to consult the printed services.

Two data bases brought out by Institute for Scientific Information (Philadelphia) namely *SCISEARCH* and *SOCIAL SCISEARCH* are extremely useful. These correspond to printed versions entitled *Science citation index* and *Social sciences citation index*.

15 Computerized Search Service

From a given data base containing information relevant to the inquiry in hand, a computer can produce an output in the form of a print out. The output may have high precision ratio and low recall, or *vice versa*. It is also possible to arrange the output under broad subject categories, along with abstracts or keywords. The data bases can also be continuously up-dated.

Computerized systems of information retrieval are of immense value, especially when one wishes to carry out comprehensive searches or search is for highly specific piece of information. ESRO (European Space Research Organization) Space Documentation Service (SDS) operate in on-line real time , interactive information retrieval (RECON) which consists of a network of remote terminals located in member states of ESRO linked to a central computer in Frascati (Italy) by means of telephone lines. Each such terminal has direct access to central data base at Frascati.

A computerized information service provided on experimental basis is described here. This is a good example of kind of service, which can be provided even in developing countries. ESRIN/RECON on-line long distance demonstration took place during 20-25 September 1976 at Bombay. This was a milestone in the history of documentation services in India. This became possible because of the development of telecommunication facilities. This demonstration was sponsored by UNESCO/UNISIST. During the project, Bombay was linked to ESRIN Centre in Frascati, near Rome. This centre possesses about dozen data bases and is able to provide access to about

7.5 million references in science and technology derived from the data bases. During the demonstration, the data bases of ESRIN were searched from a terminal located at Tata Institute of Fundamental Research (Bombay). The references so retrieved were shown on a screen and desired references were then printed out.

The above demonstration was on-line information retrieval. Here the user is seated at a terminal connected to the data base and is able to interact with the computer, modifying the search strategy on the basis of responses, if necessary, as he proceeds. In other words in on-line system, a searcher through some kind of terminal has immediate access to the data base and is also able to interrogate with the computer directly. The output can be displayed on a console ·or printed out, if required. In off-line method, a user is required to send his request to a remote computer facility where it is processed in due course of time and the result of search in the form of output returned to him at some later date, containing considered to be a good proportion of relevant material and very little "noise."

New York Times Information Bank (NYTIB) is a general search service available on machine-readable data base. It consists of (*i*) Index and abstracts from printed version of the *New York Times Index* and (*ii*) Select-indexing of 70 other newspapers and periodicals. Books are covered when these are subjects of reviews. This data base gives emphasis to current events and biographical information.

Among on-line interactive information services available on commercial basis, mention may be made of ·Lockheed's DIALOG and System Development Corporation's (SDC) Search services. Both of them provide direct access to a large number of data bases. DIALOG, for instance, provides on-line access to a large number, of data bases covering a wide range of subject areas including social sciences. The data bases include *BIOSIS previews* and *Chemical abstracts condensates* with 19,96,000 and 2,500,000 records respectively. The great advantage lies in their semi-monthly/monthly updating and cumulation which makes them available for ·future purposes.

On-line or interactive searching is carried out by means of a terminal located in a library, research or business office and home. With the help of modern telecommunications and computer facilities storing a large mass of records drawn from recognized data bases, it is now possible to obtain the requisite information through the terminal by telephoning, say DIALOG with millions of articles, books, reports and research projects stored in it. All you need *to* do is to identify the terms relevant for your purpose. The *results*

are printed on the screen instantaneously. The full text of the documents can be obtained through mail within a day or two on your desk.

Each search may cost $ 25 to $ 90 per hour. Off-line print rate per record which varies from 5 per cents to 20 per cents is, however, nominal, *Chemical abstracts condensates* cost $ 35 per connect hour. The availability of the *condensates* through on-line service in Delhi as envisaged by the Electronics Commission may eliminate the need for multiple subscriptions for libraries in Delhi to *Chemical abstracts* to some extent.

The on-line retrieval services have also begun to be made available through the international TELEX network. Three dollars per minute is a typical charge for the service. It is thus to be seen that the on-line services are within the means of selected number of libraries in India. They should indeed act as information centres for the country as a whole.

16 Interview

In computer assisted searches of data bases (indexes and abstracts in machine-readable form), interview is considered crucial. In order to achieve successful searches, enough time has got to be spent on an interview. The cost of such search can be high if interview has not been given due attention. The questions have to be framed in a form which should be acceptable to the data bases. This requires that the reference librarian should understand the question fully before starting the search in the computer. The pattern of interview has to follow new approach unlike manual operation. In a manual operation, a librarian can take a casual approach to interview but in computer operation, a casual attitude can prove to be too costly.

17 Compilation of Bibliographies

In bibliographic work, listing involves arranging thousands of entries again and again in different sequences. In the case of a bibliography published periodically, entries from individual issues may in addition, have to be cumulated in different sequences. This kind of work is enormously time-consuming. There is also the chance that inaccuracies may creep in: The application of computers for handling bibliographic work heralds new and diverse possibilities in terms of coverage, arrangement, promptness, consistency, accuracy and accessibility. It now becomes possible to manipulate unit records so as to compile a bibliography which, in terms of its scope, can take care of a required combination of characteristics and also

foreign publications. In actual practice, it means that the central organization catalogues the documents, records the data on magnetic tape and supplies libraries with copies of the tapes. From the magnetic tape they can then produce printed catalogues of their collection or entries on cards and various kinds of bibliographies by using a computer. The MARC service is receiving more and more acceptance all over the world.

The MARC II format has been adopted and developed by the BNB (*British national bibliography*) in close co-operation with the Library of Congress. BNB is using a modified format for producing its weekly lists, cumulations and printed cards. Thus, we find that two national agencies (Library of Congress and British National Bibliography) are using compatible formats, which have important implications for bibliographic control at national and international levels.

MARC and similar types of machine-readable formats provide possibilities for the production of general and special bibliographies. There is a possibility that catalogues of the great libraries of the world might be converted into machine-readable form using a MARC type format. A by-product of this could be subject bibliographies, restricted in terms of language, period, country, kind of material, etc. The MARC project is a remarkable achievement and is likely to revolutionize the field of bibliography.

191 Computerized SDI

Systems of computer-based Selective Dissemination of Information (SDI) for individuals have been developed in many fields especially physics, chemistry, electronics, engineering and nuclear science. A subscriber to these services receives computer-produced indexes and abstracts on cards or paper in his field of specialization.

A computerized SDI project is being carried out at Madras is described here. An attempt is being made to develop CHEM/SDI project CHEM/SDI is a pilot project of UNESCO/UNISIST for computerized SDI in South Asia. It is an experimental project using CAN/SDI software and CA CONDENSATES magnetic tapes serve as a data base. CAN/SDI selects current information from many information sources such as journals, reports, books, patents and conferences that are covered in the latest issue of CA CONDENSATES magnetic tapes. The process of selection and matching individual profiles against CAC tapes is carried out by a fully computerized process. The service aims to serve over 130 chemists and chemical engineers and technologists in India and neighbouring countries. The users

are alerted every fortnight with a few references of their interest. The success of the project will enable the developing countries to organize systematically computer-based SDI services, using existing machine-readable bibliographic data bases.

One important development is that one can buy in the form of a magnetic tape or disc or microform those sections of the subject field covered by computerized service, which are related to his field of interest. Such is the case with INSPEC.

An important development in the provision of SDI service is the provision of direct access to a computerized data base. Under such an arrangement, a library subscribes to the services offered by an organization producing the data base. Computerized terminal is set up in the library. The subscriber is allocated an authority code, which enables him to connect the terminal to the data base at fixed hours or whenever the need arises. The kind of service has immense possibilities.

192 Union Catalogue

Ideally speaking, a union catalogue should be a part of a machine-readable data base. As a result, librarian sitting at the computer terminal can search the data base. After locating the title in the data base, one can request the computer to send a direct request for the item on inter-library loan. This has already been achieved to some extent in some of the systems being used in USA. It is hoped that the development of information network will take care of this requirement also.

193 Limitations of Computers

In case of comprehensive searches or for very specific information, highly sophisticated computerized system is extremely useful. But in case of searches of general nature or of elementary texts, manual methods of search have been found to be economical, quicker and also satisfactory.

However, a computer cannot do final sorting of information, which could be useful to the inquirer. This part of the job can be done by the user or a librarian himself. It may be pointed out that a computer cannot critically evaluate the documents. It also cannot prepare a logically consistent account such as a state-of-the art report.

2 METHODS OF PRODUCTION

New methods of printing library catalogues, bibliographies and

reference books are now being used. For example, photo-offset lithography has been used to produce major catalogues, bibliographies, certain kinds of reference books.

It is to be noted that photography has been made use of successfully in the compilation of union catalogues. Here, catalogues of cooperating libraries are photographed and catalogue entries made from the film by some suitable method of reproduction. One must keep in mind that problems of compilation depend a great deal upon the uniformity of cataloguing practices.

Computers are being used increasingly to print book catalogues, trade bibliographies and other kinds of reference books. It is easy to keep these up-to-date, and multiple copies can be obtained cheaply. For the same reasons, computers are also being used increasingly for the compilation and printing of union catalogues, a practice also beginning to take place in developing countries. Computer-controlled photo-composition methods for printing are being used in many trade bibliographies, national bibliographies, and abstracting and indexing services. This approach to printing is being used increasingly.

Some bibliographical tools are being produced on microfiche/microfilm on experimental basis. *Information science abstracts, cumulative index, 1966-1975,* is available only in 16 mm microfilm. *Keesing's contemporary archives, 1931-1975* is also available on microfiche.

21 Micrographic Technology

Microform is another form of publishing. Many books, reports, newspapers, periodicals are now-a-days available on microfilms. Very often the same material is also available in the form of traditional printed books. Here, we may mention the use of Computer Output Microfilm (COM) technology. This technology allows print out of machine-readable data on microfilm. This can be used itself or employed to assist in the printing of hard copies.

22 Machine-readable Form

Reference books are normally produced in printed form. There are other formats also. Instead of printing, it may be issued in machine-readable form. Usually such a form may be on the reels of magnetic tapes. As a result, traditional reference books have become available for mechanical searching. *Psychological abstracts* is a service, which is available in printed as well as machine-readable form.

In a printed format, of a service such as *Psychological abstracts* for a retrospective search, one is required to search through indi-

vidual volumes unless a cumulation is available. But due to the availability of the machine-readable form, a computer can print out the required citations in a very short time. The process is not only faster but is more accurate and comprehensive.

3 STANDARDIZATION

The application of computers has brought home the great importance of uniformity, precision, and compatibility of bibliographic tools for cooperative ventures. Therefore, during recent years, serious attempts have been made to achieve international bibliographical standardization. The International Standard Bibliographic Description (ISBD) is a good example of an attempt towards uniform cataloguing practices. ISBD was elaborated by a working group set up by the International Meeting of Cataloguing Experts (IMCE) held at Copenhagen in 1969. In 1971, the ISBD (M) came out in final form as a text explaining the working and application of ISBD having been issued by the IFLA (International Federation of Library Associations and Institutions) Committee on Cataloguing. This standard is meant for monographs. Similar standards have appeared for serials, maps, non-book materials, old book etc. These have been designed mainly to serve as a means for communication of bibliographic information. These make it possible to create records from various sources which can be interchanged. These facilitate the interpretation of these records, irrespective of language. Above all, these facilitate the conversion of such records to machine-readable form. The standards specify the elements and their order and style of writing for a bibliographic description.

The above standards are now being used widely in many national and international bibliographies and by a number of institutions. AACR 1 has been revised in the light of ISBD (M). This is an important step. The adoption of ISBD, a standard method of document description, was accepted easily to a great extent because of the requirements of the MARC project for compatibility with regard to punctuation, format, style of writing, etc.

In order to get the best out of the MARC project, its format as a basic international module has been accepted, which is an important step towards standardization.

4 INDEXING TECHNIQUES

There is now a greater appreciation of the importance of the subject

approach. New methods to satisfy the subject approach are being tried. *British national bibliography* and many other bibliographies are using PRECIS (Preserved Context Index System) to derive subject headings. The PRECIS system has been devised mainly to produce computer-generated indexes.

Similar attempts are being made to discover indexing methods, which should be compatible with computerized information. POPSI (Postulate based Permuted Subject Indexing) is another method being developed by DRTC (Documentation Research and Training Centre) at Bangalore. It was used successfully to compile a bibliography on Mahatma Gandhi. Experiments have shown that POPSI is quite compatible with computerized information. Thus, it may be used for computer-based subject indexing.

5 COOPERATION

In 1969 the Chemical Society (London), West Germany's Gesellschaft Deutscher Chemiker and the American Chemical Society agreed to develop and operate a common computerized secondary information system for chemistry and chemical engineering to serve these three countries. Thus British and German organizations provide information in a particular area as an input to the computer processing system for Chemical Abstracts Service.

In 1970, three information services in the United States, namely Chemical Abstracts Service, Engineering Index, Inc., and Bio-Sciences Information Service, reviewed their services in relation to coverage, editorial and indexing policies, and data recording practices. Thus in 1972, CAS and BIOSIS began an effort to coordinate coverage and indexing practices in their publications and services, the idea being to avoid overlap in the coverage and to improve the access to the information stores of both chemistry and biology. These are stepping stones towards the creation of a coordinated international network for chemical information.

The conversion of bibliographic data to magnetic tapes has made it possible to exchange such data between different centres. This has made it possible for IFLA to work towards a world-wide system for the organized exchange of bibliographic information, the goal being to achieve Universal Bibliographic Control (UBC).

6 PHYSICAL FORM

Many bibliographical services are beginning to be issued in a

variety of forms other than print. The complete collection of *Chemical abstracts* is also available on 16mm microfilm. Abstracts in selected sections are issued in computer-readable form. Current issues of *Biological abstracts* are also available on microfilm, and *Physics abstracts*: *Science abstracts series A* is available on microfiche. More and more of bibliographical tools are also being produced on microfiche, though on experimental basis.

7 NEW INFORMATION ROLES

Within the last 10 years, the library/information science field seems to have been introduced to a variety of information roles such as the technological gate keeper, the information communicator, the intelligence officer, the information broker, etc. We hardly know anything about many of these new roles. It will take some time before these concepts get recognized properly. It is rather difficult to tell whether these roles offer any new service to user, which is not already being given to him or merely overlap with the roles already being performed by librarians/information officers. Out of the roles enumerated above, the roles of technological gate keeper and the information broker need some explanation. A broker (a member of a planning team) is expected to provide information to a group of planners (not exceeding eight). He packages, validates as well as evaluates data to serve the requirements of his users. He interprets information in the context of the problem faced by his patrons. He is considered as a full-fledged member of the group, participating in its professional work. He also organizes as well as participates in the regular meetings of the group. A technological gate keeper is an expert selected because of his friendly nature, technical authority in the major areas of work and farsightedness in the organization being served.

The variety of information roles is increasing. This is due to the fact that the field of knowledge is dynamic and a reference librarian is called upon to perform newer roles. A reference librarian should try to come up to the expectations.

8 FUTURE

There is every indication that liberal theory of reference service will gain ground in all types of libraries. However, this is not going to happen in immediate future. This is especially true of developing countries, where the provision of reference service is yet to be recognized as a basic service to be provided in any type of library.

The information is being considered as an important national resource and thereby, the needs of researchers, planners and decision-makers are getting more attention. As a result reference services will have to be strengthened in libraries serving these categories of persons. Of course, service to other categories of users will not be neglected.

The reference librarian of future is more likely to turn over the quick ready-reference work to semi-professionals or non-professionals and spend more of his time with research-type queries. Thus he would also be able to devote more time to the supervision of the work of semi-professionals and non-professionals. However, there is a controversy about whether or not ready-reference work can be handed over to persons other than professionals.

Availability of information networks is likely to revolutionize the dissemination of information. In other words, information systems such as ESRIN/RECON will enable one to get information from any part of the world in a matter of seconds. With the establishment of network of information centres and libraries, one can even visualize that a time may come when a user will have terminal at his home. He will sit at home and type out his query on the keyboard. Immediately, he will get an answer on the cathode-ray screen. If required, the reader will be able to get the output in printed form or some other form. It would be possible for him to interrogate with computer to get pinpointed and exhaustive information. The present day technology is capable of achieving the above. Provision of computerized SDI service to researchers, planners, decision-makers, etc., will become a normal service provided by any library. Whatever else might happen but human beings to provide personal assistance would always be required.

91 CONCLUSION

At one time, the suitability of computers for the production of reference tools was questioned, due to the poor quality of printing, limited range of punctuation marks and non-availability of small letters (only capital letters were available). However, much improvement has taken place in these respects. Computer printers being extremely slow compared with central processing, this resulted in high costs of production. This problem has since been solved by using the cathode-ray-tube, which can be photographed at a high speed as it displays a large and varied number of characters simultaneously.

The application of computers for bibliographic work has been extremely successful. A bibliography produced on machine-readable tape can be constantly revised and allows access of all kinds. The work can be done promptly, accurately and consistently. Further it appears that there are a large number of possibilities for cooperative ventures. In spite of great advantages, conventional published bibliographies will retain their own importance in the field of bibliographic organization.

The application of computers to compile or control bibliography has been mostly confined to the field of science and technology. However, social sciences are also beginning to receive attention in this regard. Great advances have been made in the automation of indexing and abstracting services, which are the basic tools of any reference librarian.

The indexes to existing services are not quite satisfactory. The same is true of KWIC (keyword-in-context) indexes as well as subject indexes due to the fact that retrieval of relevant papers is rather low. As a result, new indexing techniques like PRECIS and POPSI are being worked out, which might produce better results.

Concentrated efforts are being made to establish and implement national information services on a sound basis in various countries. Attempts are also being made to achieve universal bibliographic control.

The cost of many indexing and abstracting services and other kinds of reference books has increased tremendously making it extremely difficult for libraries in developing countries to subscribe to them. Even large libraries in these countries are facing difficulty in this respect. Costly services like *Chemical abstracts*, *Science citation index*, *Biological abstracts*, etc., are increasingly becoming beyond the reach of even large libraries. The question of small, specialized libraries subscribing to them does not arise. AGRIS, BA-PREVIEWS, CA CONDENSATES, COMPENDEX, INIS, INSPEC, MARC, MEDLARS, NASA, SCI are so costly that very few libraries in developing countries can afford these. The general encyclopaedias such as *Encyclopedia Americana, New Encyclopaedia Britannica* are being revised continuously requiring replacement too often. Even large libraries in developing countries cannot afford to purchase these regularly. The same is true about many other reference works. The problem becomes more acute due to the fact that the number and variety of reference books are increasing at a fast pace. What is the solution? The solution lies in being highly selective and participating in cooperative acquisition programmes. Selection must be done

very carefully, keeping in view the requirements of the users.

India like many other developing countries is not well served in the matter of reference books. There are many areas on which either there are no reference books or the existing ones are not fully satisfactory. The situation is certainly improving. The international services have not given due attention to information about India.

There are indications that rapid developments in computer technology, telecommunication, printing and the pressures generated by increasing amounts of publication in various fields of knowledge, especially science and technology, will lead to closer cooperation amongst the world's various information services. A concentrated effort to achieve effective coordination between producers of primary and secondary sources of information in various disciplines and countries could help bring down the cost of these services and also avoid overlap in coverage. This will also result in more effective service. Efforts are certainly being made in this direction. Chemical information is one such area where steps are being taken to achieve fruitful results.

In future, the use of computer and machine-readable bibliographic information, along with International Standard Bibliographic Description is going to play an important part in the development of bibliography. This is already apparent.

We are still far away from the automation of direct reference process. Although, we have not been able to apply automation to direct reference process but reference librarians have felt encouraged to analyse the reference process and also reconsider the philosophy of reference librarianship including redefinition of goals of reference service.

The computers have generally led to increase in the scope and variety of reference services, which can be provided to the users. In countries like USA, the availability of machine-readable data bases have made it possible to bring improvements and changes in the traditional literature search approaches. As a result, a reference librarian is in a better position to provide answers to the queries. Interestingly, the new information technology has also made it possible for a small library to get linked up to a network whereby, it can possibly make use of information sources available in other libraries. Sooner or later, this is also going to happen in developing countries like India. There are immense possibilities for sophisticated information processing and dissemination.

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